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**IS CUSTOMER PERCEIVED VALUE INFLUENCED BY
NATIONAL CULTURE IN BUSINESS TO BUSINESS MARKETING?**

An empirical investigation

IAN McKEOWN

A dissertation submitted in partial fulfilment of the requirements of the University of Chester for
the degree of Master of Business Administration

CHESTER BUSINESS SCHOOL

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Abstract

The study forms an empirical investigation that uses a census approach to determine which business factors are most valued by Asian toothpaste producers.

A positivist approach, supported by an interpretivist philosophy is used to gain understanding of how culture affects perceived value in business-to-business relationships. This takes the form of deriving and testing a conceptual model, using a questionnaire as the research instrument.

Covering 4 countries in the region (China, Indonesia, Japan and Korea) the study finds that while 'low cost in use' is a common desire for all respondents, a number of differences exist concerning the relative value of other business factors and elements forming these.

A random sample of recipients was not used, but rather a focused census of toothpaste producers in the Asian region. This limits the scope of study's conclusions.

Findings from the study are used to formulate recommendations that INEOS Silicas might follow to leverage competitive advantage in the region, based on cost, service and reliability. A difference in emphasis was found for each of these elements in the different counties surveyed.

Declaration

This work is original and has not been submitted previously for any academic purpose. All secondary sources are acknowledged.

Signed:

Date:

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Chapter 1

Introduction

1.1 Background to the Research

INEOS Silicas is one of 16 companies forming the INEOS group. INEOS is a private company and the 3rd largest chemical company globally, with an annual turnover of about \$ 33 billion.

INEOS Silicas is a multinational enterprise with 8 manufacturing sites in 5 continents. It operates a globally integrated business with a regiocentric approach to sales. The company is a world leader in silica and alumina technology, with an annual turnover of about Euro 230 million. Products include liquid and solid silicates, gel and precipitated silicas, and a range of zeolites. These products are sold into a number of business segments.

Because customer value is a strategic weapon in attracting and retaining customers for both manufacturing and service providers (Gale, 1994; Woodruff, 1997; Parasuraman, 1997), a practical outcome of the study is to identify actions INEOS Silicas might take to gain competitive advantage in the Asian region.

Although there is a significant body of knowledge about the concept of customer value, it is fragmented and there is relatively little empirical research on the subject (Wang *et. al.*, 2004). Furthermore, relevant studies have not yielded any unambiguous interpretations of the key dimensions of customer value (Patterson *et. al.*, 1997; Woodruff, 1997; Lapierre, 2000).

Few studies have focused on how superior customer value is construed in the perspective of customers and how a reliable and valid measurement scale for the construct might be developed (Sheth *et.al.*, 1991; Sweeney and Soutar, 2001).

A first objective of this study then is to determine customer perceived values in the Asian toothpaste market.

By drawing on the body of literature on customer value the study defines and measures customer value in terms of get (benefit) and give (sacrifice) components (Woodruff, 1997; Slater, 1997; Day, 1994) – thus adopting a broader concept of sacrifices than the simple price assessment suggested by Sweeney and Soutar (2001).

Today the business environment is a global one with firms operating in a broader and more diverse set of markets (Wolf, 2000). Success in foreign markets is dependent upon a number of factors, some of which are fundamentally controllable, while others are not (Takada and Jain, 1991) and must be considered when formulating marketing strategy.

It has been reported that globalisation of markets and economic development has created a progressively homogenised world market, with converging consumer tastes and desires, so that differences in national tastes or modes of doing business are disappearing (Elinder, 1965; and Levitt, 1983). This viewpoint argues that increased international linkages and infrastructure has resulted in less differentiation due to socio-economic factors, with people living in a more uniform pattern (Hannerz, 1990). This has facilitated the emergence of global brands (Aaker and Joachimsthaler, 1999) with relatively standardised marketing strategies employed across cultural and geographic boundaries (Zou and Cavusgil, 2002).

Thus, are cultural considerations important for international markets to consider, or is globalisation making these a thing of the past?

There is a paucity of empirical evidence to support the notion that development of national socio-economic infrastructures has facilitated homogenisation of world cultures (Yeniyurt and Townsend, 2003). In fact there is evidence of increased divergence, especially in industrialised countries (Usunier, 1997; Craig et. al., 1992). It is suggested that even in Europe, with economic union and progression

toward standardisation of political and social structures, that the strong rooting of consumers' values in history and tradition ensures people express themselves through their own specific value patterns (de Mooij, 2000). It has also been found that even after exposure to globalisation, consumers from different cultures have different attitudes, perceptions, tastes, preferences and values (Suh and Kwon, 2002). Therefore it is argued that consumer behaviour remains diverse and that consumers are not in all cases willing to change their habits in favour of low-prices that are increasingly available on the world market (Kotler, 1986).

Culture may thus be regarded as an intrinsic variable specific to the market and a significant factor in international marketing research (Dunning, 1997). According to Levitt (1983) each individual / country is unique and the reality of differences means that firms cannot always directly apply the approach for one country to another. Coca Cola is an example of a company successfully marketing a relatively standardised product promoted by adaptation to different local markets. Today examples such as Ambev, Disney, HSBC and MTV promote themselves as thinking globally and acting locally.

It can therefore be posited that cultural differences remain an important aspect of international marketing research, because cultural norms and beliefs are powerful forces shaping people's perceptions, dispositions and behaviours (Markus and Kityama, 1991; Triandis, 1989). To understand the impact of these variables on product choice decisions, cultural differences have been considered from a range of perspectives, including their impact on attitudes and persuasion (Aaker, 2000), as well as their role in diffusion of new products (Yaveroglu and Donthu, 2002). Yet a gap in the literature appears to exist which considers if there is a relationship between cultural attributes and perception of value in B2B relationships.

It is a second objective of this study therefore to contribute to the extant knowledge in cross-cultural marketing research by providing empirical evidence regarding the role of national cultural differences in perception of value in B2B markets.

The study is organised as follows. Following this introduction, theoretical background, an integrated conceptual model and key hypotheses are provided. The next section presents the methodology of the study. The empirical analysis is conducted using a questionnaire designed to determine customer perceived value and national culture based on a customer survey of buyers in Asia. The conceptual model and hypotheses proposed in the study are tested. Finally, conclusions and implications are presented, and limitations and future research directions discussed.

1.2 Research Question

The problem to be addressed by this present study is to understand the components of customer value in business-to-business relationships and how national culture might influence these.

The purpose of the study is to identify means to leverage competitive advantage through tailoring value using appropriately defined value components.

The study will be grounded in teaching about customer value in business-to-business relationships, afforded by the extant literature.

Further background knowledge will be based upon literature research concerning cultural influences as noted for example in journals such as, the *Journal of International Business Studies* and *International Marketing Review*.

These two strands will be brought together to construct a conceptual model, which will be tested, using questionnaires sent to business customers located in Asia, by answering the following questions:

Q1. What are the essential components that INEOS Silicas' customers' value?

Q2. Does national culture affect the essential components of INEOS Silicas' customers' value in a business to business relationship?

The study forms an empirical investigation that uses a census approach to determine which business factors Asian toothpaste producers' value. The information is analysed to compare responses from 4 different Asian countries to determine if national culture can be said to influence perceived value.

The present study focuses on INEOS Silicas' Asian dental business, asking the question:

Is customer perceived value influenced by national culture in B2B marketing?

1.3 Justification for the Research

Increased world trade means interaction between cultures is more prevalent. The literature is replete with research on customer value marketing related to consumer businesses (for example: Dodds and Monroe, 1985; Dodds, 1991; Liljander and Strandvik, 1995; Bloemer and de Ruyter, 1995; Cronin and Taylor, 1992; Patterson and Johnson, 1993). It is however sparse with respect to business-to-business marketing, in particular with respect to the influence of culture on perceived value in business-to-business marketing.

An investigation aimed at examining customer value in the context of culture would fill a gap in market teaching.

On a practical level, world trade essentially comprises business-to-business relationships. An understanding of how culture influences perceived customer value might be a means to leverage competitive advantage, through tailoring marketing according to cultural groups.

1.4 Methodology

Systematically listening to customers provides a means not to only determine how well a business is performing its' function, but also to gain understanding of what it is customers demand (or expect / value) of their suppliers.

There are many methods used to gain customer feedback that are generally accepted as valid and reliable (Crotts and Erdmann, 2000). Arguably the most common method is the self-administer survey (Parasuraman *et. al.*, 1990), and this is the means used in this study.

The research scope is limited to INEOS Silicas' dental business in Asia. This is to allow a sufficiently in-depth study to be conducted across a range of national cultures in order to properly address the research question.

A self-administer questionnaire has been designed following teaching in the extant literature reported in Chapter 2. This is used to ask INEOS Silicas' customers their views on what they perceive as value.

Information from value is combined with information on national culture.

The questionnaire design is described in Chapter 3.

Findings from these sources are linked to gauge what, if any, influence national culture has on perceived value. The aspect of corporate culture is excluded from the study, although it is acknowledged this may play a role in influencing perceived value. This aspect is excluded due to difficulty accessing external organisations in sufficient depth to gain meaningful information.

1.5 Outline of the MBA Dissertation

Chapter 1 introduces the research problem and centres on the research question, which asks if 'customer perceived value' is influenced by national culture in business to business relationships. Further, the research is justified in terms of

potential learning from the study. Limitations to the research scope are also described. Finally the research instrument is introduced, together with an overview of the research methodology.

Chapter 2 provides a review of the extant literature of customer perceived value and cultural values. The review highlights a gap in the literature that the research aims to fill.

Chapter 3 reports the methodology and research instrument used in the study. In *this chapter the research philosophy and strategy are described, as well as the* research instrument. The advantages and disadvantages of the selected approach are considered, as are the steps taken to overcome the disadvantages. The chapter also constructs a conceptual model of perceived value that includes a cultural dimension. Based on existing literature, the model provides a background for empirical enquiry.

Chapter 4 presents patterns of results and analysis of these in the context of the research question and conceptual model. The chapter provides descriptive information on the subjects of the study, such as their nationality. Results are presented in the same order as the research questions introduced in Chapter 1. First the essential components of perceived customer value are identified from the questionnaire responses. Next the potential influence of national culture affecting these perceived values is examined. These results are compared to the conceptual model and tested to determine if these fully answer the research question.

Chapter 5 begins by revisiting the gaps in the extant literature that give rise to the research question. It then considers the successes and failures afforded by the chosen research methodology, and suggest means by which these might further be improved. The findings for each research objective, the basis of results from Chapter 4, are examined in the context of the literature review of Chapter 2. Conclusions about the research question are then made both on the basis of findings from Chapter 4 and on learning gained from using the chosen research methodology. Limitations to the research that came to light during the empirical

study are considered. Finally opportunities for further research around the research question are presented.

Chapter 6 provides recommendations based on the study findings that INEOS Silicas might use to leverage competitive advantage. Implementation of these recommendations is considered.

1.6 Definitions

Standard

According to BSI, a standard is a published: "specification that establishes a common language, and contains a technical specification or other precise criteria and is designed to be used consistently, as a rule, a guideline, or a definition".

<http://www.standardsglossary.com/>

The International Standards Organisation (ISO) has developed a set of international standards that can be used in any type of business and are accepted around the world as proof that a business can provide assured quality.

www.rapidspec.com/RapidSpec%20Site/PROJECT%20ASSISSTANT%20SECTION/DOC%20SERVICES%20SECTION/Project%20Literature/rsp-Proj_Prodtermpg.htm

ISO is the International Standard Organisation. Established in 1947, this is a non-government federation of national standards bodies from around 150 or so different countries.

<http://www.standardsglossary.com/>

ISO 14001:1996

Environmental management systems.

<http://www.standardsglossary.com/>

ISO 9002:1994

Quality systems.

<http://www.standardsglossary.com/>

Business ethics is the application of ethical values to business behaviour. It applies to any and all aspects of business conduct, from boardroom strategies and how companies treat their suppliers to sales techniques and accounting practices. Ethics goes beyond the legal requirements for a company and is, therefore, discretionary. Business ethics applies to the conduct of individuals and to the conduct of the organisation as a whole. It is about how a company does its business, how it behaves intrinsically <http://www.ibe.org.uk/faq.htm>

Culture is a concept that has been defined in a number of ways (Kroeber and Kluckhohn, 1952). According to UNESCO, *culture* 'is that set of distinctive spiritual, material, intellectual and emotional features of society or social group... that encompasses... value systems, traditions and beliefs'.

<http://en.wikipedia.org/wiki/Culture>

Value is defined in marketing literature as a ratio or trade-off of total benefits received to total sacrifices (Patterson and Spreng, 1997).

Business to business / consumer marketing is business that sells products or provides services to other businesses / end-user consumers.

www.marketingterms.com/dictionary/b2b

1.7 Summary

This chapter introduces the background to the research, putting this into the context of INEOS Silicas' dental business. The research problem and research questions are described and the research is justified. The methodology is briefly described and justified, the report is outlined, and the limitations are given.

Chapter 2

Literature Review

2.1 Introduction

This chapter reviews existing literature concerning the concepts of value and culture. It forms the foundation of the research by providing insight into previous work in these areas. The strengths and weaknesses of the earlier work are assessed and omissions identified. The review serves as a basis for arguments presented by findings from the current study.

The review is drawn mainly from current journal or conference articles, with the objective of placing the research in the context of current knowledge. In this context the review is focused on the applicability of the extant knowledge to the research question. The scope of the review is limited mainly to business to business relationships as these form the research objective. However, where appropriate, some reference is made to business to consumer marketing.

2.2 Customer Perceived Value

Huang and Tai (2003) suggest that value is more important than quality, since value is that which is immediately considered by customers. Parasuraman (1997) and Woodruff (1997) who show that customer value is an important source of competitive advantage support this emphasis on value. Thus, as a first priority, business should know the value needs of its customers, while satisfying these needs is generally second (Huang and Tai, 2003).

Creation of superior customer value, through value-based / value-focused strategies, is a key element in increasing the likelihood of success (e.g. Slywotzky, 1996; Porter, 1996; Higgins, 1998 and Huber *et. al.*, 2001). Reicheld *et al* (2000) find that superior value leads to customer loyalty, the real driver of financial performance, and the role of customer satisfaction in influencing repeat patronage

and positive word of mouth is well-documented (Crotts, 1999; Augustyn and Ho, 1998; Kotler *et. al.*, 1998; Oppermann, 1998; Heskett *et. al.*, 1997).

The oft-cited concept of value is that of 'brand value'. In the 1980's, the discipline of creating brands out of products and services spread from the consumer goods industry to financial services, travel, retail and certain industry sectors (de Chernatony and McDonald, 1992; in Maklan and Knox, 1997). However while the experience of branding yielded rewards for some, for example British Airways, First Direct and Haagan Daz, it has not been universally satisfactory (Court *et. al.*, 1993). For instance, British Rail marketing became the subject of jokes, and in UK retailing petroleum brands lost one-quarter of their market to grocery retailers almost overnight (Maklan and Knox, 1997). Of greater concern is the loss of brand equity (Keller, 1993) which has been experienced by companies such as Unilever and Procter & Gamble.

Maklan and Knox (1997) argue that traditional branding no longer adds sufficient customer value because it is generally a standardised offer. Business processes traditionally outside the remit of brand management are increasingly generating customer value.

In B2B relationships, branding is likely to be less important than value delivery. Therefore a clear understanding of the concept of value is essential to the success of value-based strategies (Woodruff, 1997). Kortge and Okonkwo (1993) assert that value is a subjectively perceived construct. In addition, various members in the customer organisation involved in the purchasing process can have different perceptions of a supplier's value delivery (Perkins, 1993). Value therefore is the result of a cognitive comparison process, which captures any benefit-sacrifice discrepancy in much the same way disconfirmation does for variations between expectations and perceived performance (Patterson and Spreng, 1997, p.421).

The central importance of perceived value in business-to-business markets is highlighted by Gross (1997), who argues that purchasing managers buy for economic rather than emotional reasons. Therefore customer perceived value

should be the critical dimension in business marketing as opposed to the customer satisfaction construct borrowed from consumer markets.

Literature on value is essentially clustered around three categories: 'Shareholder value', 'Stakeholder value' and 'Customer value' (Reicheld, 1994). Customer value, however, is the source of all other values (Lemon *et. al.*, 2001), and:

'In the final analysis, shareholder value comes from profitable customer relationships, not from the stock exchange.' Gronroos (2000, p.9).

Supporting this view, loyalty literature shows that a small increase in customer retention leads to a major increase in net present value profits (Reicheld, 1994; Heskett *et. al.*, 1997). Shareholder value is, then, the result not the drive of sustainable competitive advantage (Kaplan and Norton, 1996).

The concept of customer value is difficult to define (Piercy and Morgan, 1997; Woodruff, 1997), although Porter (1985, p. 3) simply defines value as:

'...what buyers are willing to pay.'

There is general agreement in the literature that value is determined by the customers' perception not by suppliers' assumptions or intentions (Woodruff and Gardial, 1996; Anderson and Narus, 1998). Difficulty defining customer value stems from the subjectivity and ambiguity of value, compounded by it being a dynamic concept that evolves over time (Naumann, 1995).

Khalifa (2004) proposes customer value can be described by: *Value component models*, defined in terms of customer perceived wants, worth and need (Kaufman, 1998; Kano, in Khalifa, 2004; Thompson, 1998, p.9); *Utilitarian or benefits / costs ratio models* that define value in terms of benefits received and sacrifices incurred (Leszinski and Marn, 1997; Ziethaml, 1988; Monroe, 1990; Treacy and Wiersima, 1995; Huber *et.al.*, 2001; Monroe, 1990); *Means-ends models* that assume customers acquire products or services to accomplish favourable ends (de Chernatony *et.al.*, 2000)

These models fail to mention ‘customer satisfaction’. A rationale for neglecting this is provided by Gross (1997), who argues that in business markets, purchasing managers’ decision making is guided mainly by cognitive factors and not by affective ones.

Fishbein and Ajzen’s (1975; in Eggert and Uluga, 2002) theory of reasoned action moderates this pure approach, arguing that affective factors mediate cognitive ones to result in conative outcomes.

Thus satisfaction is considered as a mediating variable between perceived value and conative intentions even in business-to-business relationships.

These concepts of value are used in the present study to construct a conceptual model relating value to culture.

2.3 Cultural values

Pizam *et. al.* (1997) report the term ‘cultural values’ is an umbrella concept that includes such elements as shared values, beliefs and norms that collectively distinguish a particular group of people from others. It is asserted that these shared values are programmed into individuals at an early age (Otaki *et.al.*, 1986), and are resistant to change (Hofstede, 1991).

Keegan (2002, p.73) classifies cultures in terms of ‘high’ and ‘low’ contexts. These contexts are associated with particular factors that form part of interactive relationships. Terpstra and Sarathy (2000) suggest that culture includes ‘technology’ and ‘material’ culture, values and attitudes.

Cultural differences have been reported as the basis for specific “stereotypes” based on specific national origins (Crotts and Erdmann, 2000). Though there is debate as to the accuracy of national stereotyping (Dann, 1993), there is little doubt that culture is one of many forces influencing customer decision making (You *et. al.*, 2000).

The effects of both controllable endogenous and uncontrollable exogenous factors impacting on the introduction of products have been investigated in the literature (Takada and Jain, 1991). Controllable factors such as proficiency in developing marketing activities (Calatone et. al., 1987) and market knowledge processes (Li and Calatone, 1998) have significant impact on market success. On the other hand, environmental factors that cannot be controlled, but can be managed with the appropriate strategy, include national culture (Steenkamp *et. al.*, 1999; Clark, 1990) and other country based differences (Takada and Jain, 1991).

National culture has been defined in many ways (Schermerhorn and Harris Bond, 1997). One of the most widely utilised dimensions of culture is the five presented by Hofstede (1980) and Hofstede and Bond (1988) in the Value Survey Module (1994).

Hofstede (1991) asserts that cultures can be characterised on a regional basis. According to this approach, Asian and Western societies differ significantly in their cultural dimensions.

Hofstede's model has, however, been challenged (Gooderham and Nordhaug, 2002) and accused of being founded on fundamentally flawed data (McSweeney, 2002).

Holden (1998) argues that culture is a 'dustbin word'. If cultural differences are assumed to have any influence, it is seen as 'a convenient catchall for the many differences in market structure and behaviour that cannot readily be explained in terms of more tangible factor'.

De Mooji (2000) suggests that there are large differences between value systems of the peoples of Europe, even with the introduction of the single European market. It is asserted that these values are strongly rooted in history and appear to be stable over time. Thus, even with the convergence of economic systems, it is argued, there is no evidence of convergence of peoples' value systems. On the contrary, it is claimed that with converging incomes, people's habits diverge as

more discretionary income give greater freedom of expression according to individual value patterns.

The extant literature therefore shows some disagreement as to whether or not culture influences markets, and if so, if globalisation is in any case reducing this influence.

The present study aims to empirically determine if value measures, in B2B relationships, are influenced by national and / or corporate culture. The purpose is to provide a useful means to gain repeat patronage and third-party endorsements.

2.4 Business-to-Business Marketing

The fundamental principle that forms the 'marketing concept' can be traced back to the beginning of the 20th century (Svensson, 2001). This concept puts the customer's needs and wants at the centre of marketing thinking, and these should be the point of departure for any marketing process.

According to McKitterick (1957, p.78; in Svensson, 2001):

'...the principal task of the marketing function in a management concept...to be skilful in conceiving and then making the business do what suits the interest of the customer.'

The marketing concept refers to a dyadic relationship between buyers and sellers. Therefore it is limited to the channel theory that the 'marketing channel' consists of a number of interdependent firms that are involved in the production and distribution of products to the customer (Stern *et.al.*, 1996).

The marketing concept encompasses so-called 'business-to-consumer' (B2C) and 'business-to-business' (B2B) elements. In principle there is no difference between these, as they are both formed according to the marketing concept. In practice their means of implementation differ.

B2C is primarily concerned with pre-priced products made to a standard specification (Doole and Lowe, 2004, p.411) and interaction between producers and end customers is usually via adverts or other barriers.

B2B generally involves more personal contact and the exchange of significant amounts of information between the seller and consumer, before, during and after the transaction (Doole and Lowe, 2004, p.413). Thus in B2B marketing, relationship between parties is central.

Gummesson (2004) defines the relationship in this context as:

'Relationship marketing is marketing based on interaction within networks of relationships'.

Other relationship marketing definitions stress the need to develop long-term relationships with customers (e.g. Gronroos, 2000).

Management of this relationship forms the practice of 'customer relationship management' (CRM). This is the process of identifying, attracting, differentiating and retaining customers (Hoffman, 2003).

In a narrow CRM sense, the supplier is focused solely on the customer relationship and ignores the network dimension, which, according to Gummesson (2004), is important in B2B marketing.

A central feature of the B2B relationship is the concept of "trust". In particular it has been suggested that the establishment and maintenance of trust is central to building business to business relationships (Blois, 1998).

In discussing the concept of "trust", according to Baier (1986, in Blois, 1998),

'Trust then...is accepted vulnerability to another's possible but not expected ill will (or lack of goodwill) towards one'.

Govier (1994, in Blois, 1998) takes a different view that, whilst recognising that trust involves making oneself vulnerable, there is a significant positive aspect that trust involves:

'expectations of benign action and acceptance of vulnerability'.

Thus, trust involves the expectation of an element of goodwill.

In B2B relationships, trust emerges gradually into expectations of continuity which form the guidelines by which everyday interactions are conducted (Luhman, 1979, in Blois, 1998). Dealing with, and becoming, an organisation with a good reputation encourages this movement from explicit trust to unconscious trust.

The crossing of a boundary or threshold can transform this passive expectation of continuity into conscious trust or conscious distrust. So if a supplier lets the customer down, their explanation might be easily accepted and the relationship allowed to continue as before. However, there might be a point at which such behaviour triggers a loss of trust and forms a distrustful relationship (Blois, 1998).

In summary, there is in principle no difference between B2C and B2B marketing, both residing within the 'marketing concept'. They do, however, differ in their implementation and the greater contact between supplier and customer in B2B marketing gives rise to detailed relationship management centred on trust.

2.5 Conceptual Model

Jarvelin and Wilson (2003) report that:

'all research has an underlying model of the phenomena it investigates, be it tacitly assumed or explicit.'

Such models are called 'conceptual models' and developing these means specifying essential objects or components of the system to be studied, the relationships between the objectives, and the types of change in the objects or relationships that

affect the system and goals of the research (Englebart, 1962; in Jarvelin and Wilson, 2003).

Conceptual models are broader and more fundamental than scientific theories in that they provide conceptual and methodological tools for formulating hypotheses and theories. The models therefore provide a working strategy, a scheme containing general major concepts and their interrelationships. This orientates the research towards a specific set of empirically testable research questions and hypotheses.

Two key areas of literature have been identified that are relevant to this research – the concept of perceived value and the influence of national culture on peoples' perceptions. Following a comprehensive review of this literature (in Chapter 2), a conceptual model is developed.

2.5.1 Elements of the Conceptual Model

The key factors concerning customer perceived value and national culture are identified in Chapter 2. This section follows the teaching of Page and Prescott (2005) and builds a conceptual model for enquiry, based on the extant literature. None of the existing conceptual models include a component of national culture, despite this having formed a significant part of a number of studies (Huang and Tia, 2003; Khalifa, 2004; Woodruff, 1997; and Knox and Maklan, 1998). This section incorporates this national culture component to form a model for empirical study.

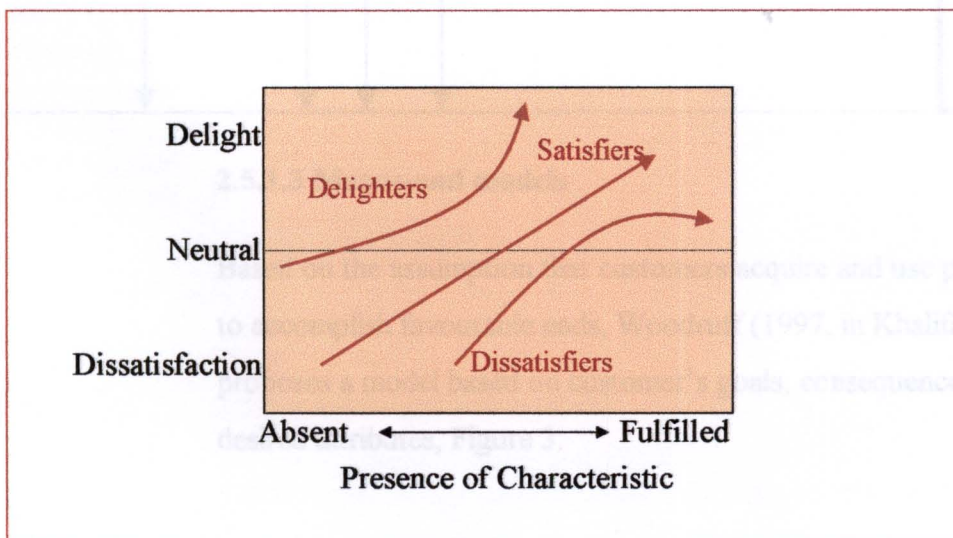
2.5.1.1 Value Components Models

Kano's model of customer perception is illustrated in Figure1 (in Khalifa, p.648). Based on the disconfirmation model taken from consumer behaviour literature, it includes three value components (Khalifa, p. 648).

- **Dissatisfiers:** Expected characteristics and generally taken for granted. Their presence only 'satisfies', but absence annoys. Thompson (1998, p.19) calls these 'basic must-haves'.
- **Satisfiers:** Features that are explicitly expected. These meet performance related needs. If only poorly met, disappointment occurs. If exceed expectations, delight can follow.
- **Delighters:** New or innovative unexpected features that may solve a latent want or need.

The model is focused on customer benefit, but ignores customer sacrifice.

Figure 1. Kano's model of customer perception. (in Khalifa, 2004: Customer value: a review of recent literature and an integrative configuration, *Management Decision*, Vol. 42, No.5, pp. 645-666)

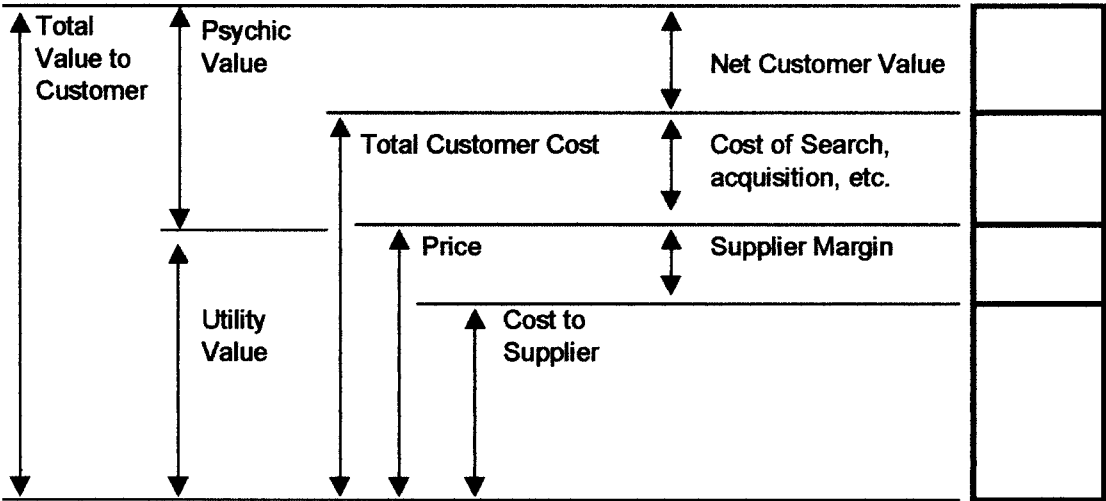


2.5.1.2 Value exchange models (or Benefit to Cost ratio)

Considering value from an exchange point of view, Khalifa (2004) proposes a model based on Huber *et al* (2001), Parolini (1999), Gronroos (1997), Groth (1994) and Zeithaml (1988), Figure 2.

Basically a ‘give and take’ model, it proposes that the customer is willing to sacrifice an amount of time, effort and money, and to take certain risks in exchange for expected benefits that outweigh their total sacrifices.

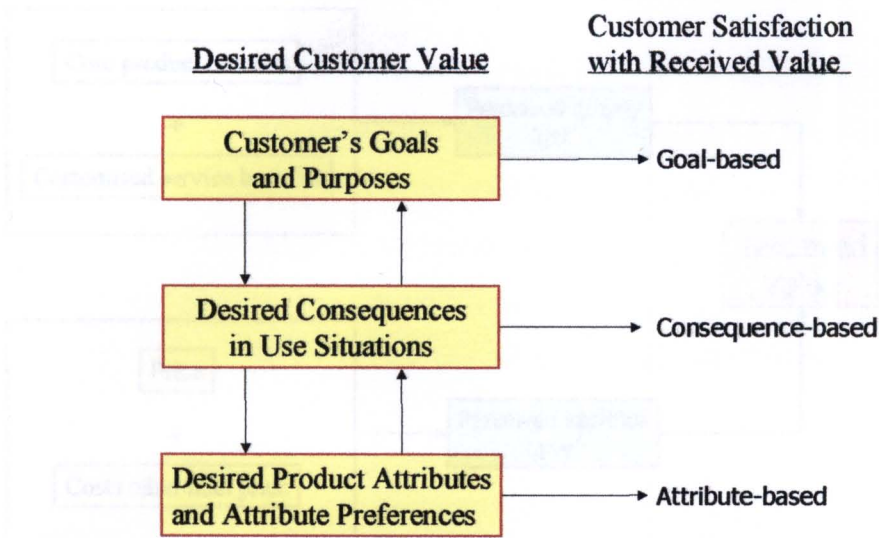
Figure 2. Customer Value in Exchange (Khalifa, 2004).



2.5.1.3 Means-end models

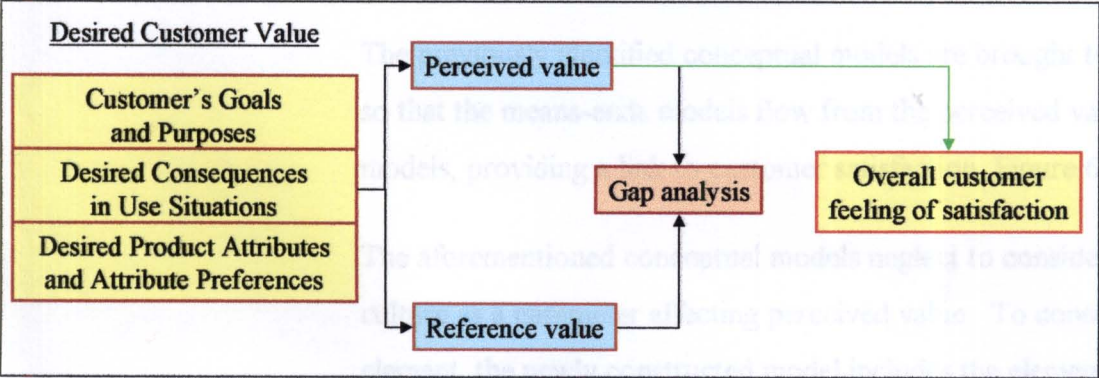
Based on the assumption that customers acquire and use products to accomplish favourable ends, Woodruff (1997, in Khalifa, 2004) proposes a model based on customer’s goals, consequences and desired attributes, Figure 3.

Figure 3. Customer value hierarchy (Woodruff, 1997, in Khalifa, 2004).



Huang and Tai (2003) extend Woodruff's model to relate value to satisfaction, Figure 4.

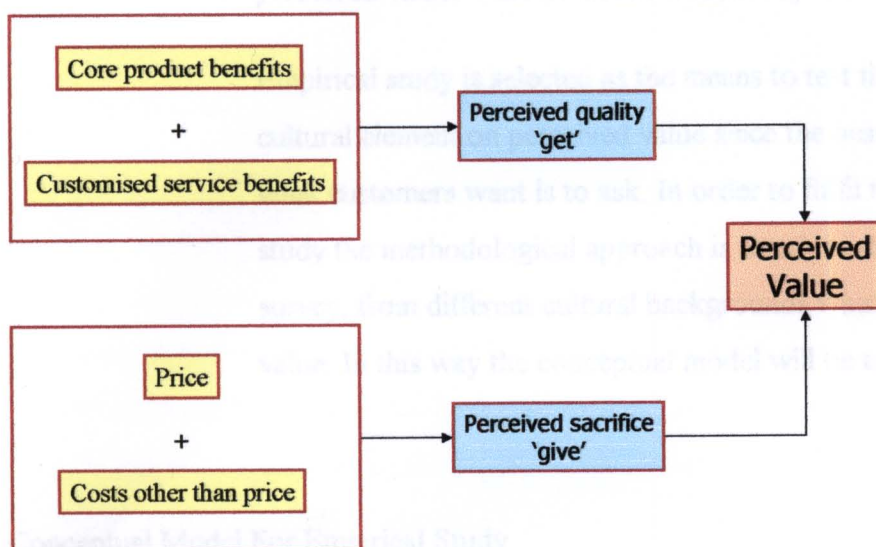
Figure 4. Relating customer value to satisfaction (Huang and Tai, 2003).



2.5.1.4 Perceived value model

The elements of customer benefits and customer sacrifices are brought together as 'perceived value' (Knox and Maklan, 1998), Figure 5.

Figure 5. The components of customer value (Knox and Maklan, 1998).



2.5.1.5 Constructing the Conceptual Model for Empirical Enquiry

The previously identified conceptual models are brought together so that the means-ends models flow from the perceived value models, providing a link to customer satisfaction, Figure 6.

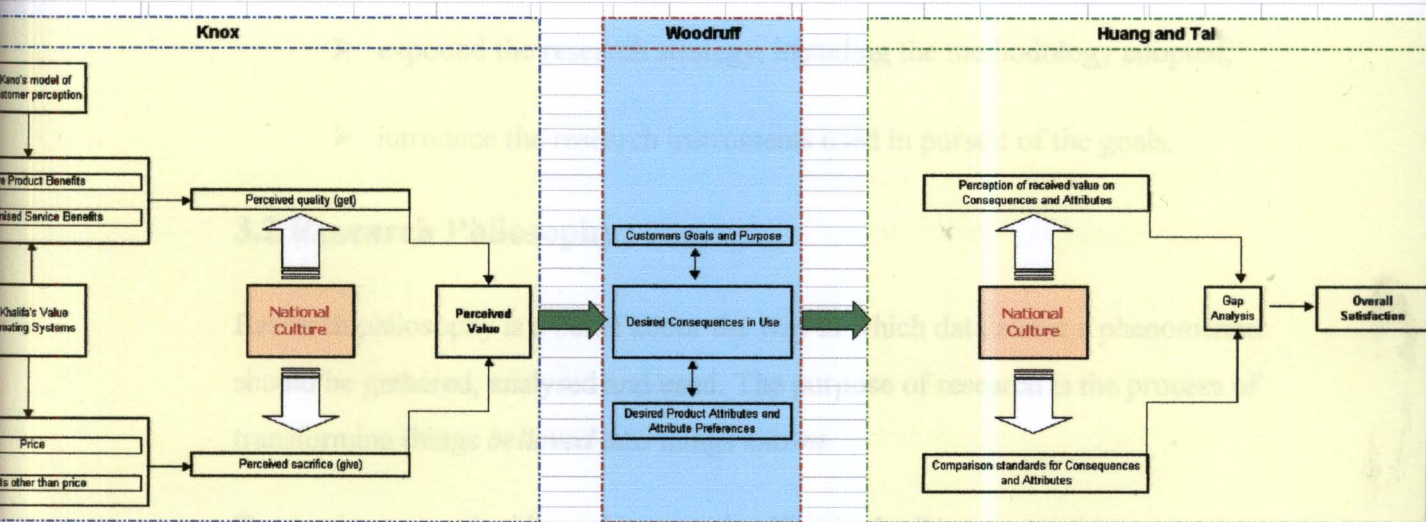
The aforementioned conceptual models neglect to consider national culture as a parameter affecting perceived value. To consider this element, the newly constructed model includes the element of national culture. This element bridges the benefits-sacrifice components of the value model. In the satisfaction part of the model, the element bridges perception of received value and comparative standards.

Positioning the cultural element as a bridge between benefits and sacrifices and between perceived value and expectations highlights

the potential moderating influence culture has on customer perceived value. This influence is tested by the empirical study.

Empirical study is selected as the means to test the influence of cultural element on perceived value since the best means to find out what customers want is to ask. In order to fulfil the aim of this study the methodological approach is to ask customers, through survey, from different cultural backgrounds what it is that they value. In this way the conceptual model will be tested.

Figure 6. Conceptual Model For Empirical Study



Chapter 3

Methodology

3.1 Introduction

The way in which research is conducted may be conceived of in terms of the research philosophy subscribed to, the research strategy employed and so the research instruments utilised in pursuit of the goal – the research objective(s) – and the quest for a solution to the problem – the research question. The research objectives and questions have been outlined in Chapter One. The purpose of this chapter is to:

- describe the research philosophy employed;
- expound the research strategy, including the methodology adopted;
- introduce the research instruments used in pursuit of the goals.

3.2 Research Philosophy

Research philosophy is a belief about the way in which data about a phenomenon should be gathered, analysed and used. The purpose of research is the process of transforming things *believed* into things *known*.

Two major research philosophies are identified in the Western tradition, namely positivist (scientific) and interpretivist (Galliers, 1992; in Page, 1999).

Positivists argue that reality is stable and can be observed and described from an objective viewpoint (Levin, 1988), without interfering with the phenomena being observed. It is contended that phenomena can be isolated and observations are repeatable. Predictions can be made on the basis of the previously observed and explained realities and their interrelationships.

Interpretivists maintain that reality can only be fully understood through subjective interpretation and intervention. The study of phenomena in their natural environment is key to this philosophy, together with acknowledgement that investigators cannot avoid affecting the phenomena they study.

As demonstrated in Chapter 2, the essence of the current study is concerned with customers' perceptions of value. It is not the intention of the study to examine 'why' the respondents hold these views.

For the study it is believed that a positivist approach, as described by Robson (1993), supported by an interpretivist philosophy is required to gain understanding of how culture might affect perceived value in business to business relationships. This takes the form of deriving and testing hypotheses formed from a conceptual model.

The research involves questionnaire design and selection of recipients. The investigator therefore will play a part in influencing the study focus, and in consequence will affect the outcome. However, by recognising the lack of objectivity associated with the approach an attempt is made to adopt a positivist quantitative approach to the development of the key research instrument (i.e. the questionnaire).

These various elements of the research approach are further elaborated in the following sections: Research Strategy and Conceptual Model.

3.3 Research Strategy

A number of research methodologies have been identified. Table 1 lists the methodologies identified by Galliers (1992; in Page, 1999). It is not intended to discuss or critique each of these methodologies. Instead focus is restricted to the methodology (viz. Survey) used in the present study.

Surveys enable the researcher to obtain data about practices, situations or views at one point in time through questionnaires or interviews. Quantitative analytical

techniques are then used to draw inferences from the data. This approach permits study of more than one variable to be made and data to be collected about real world environments. A key weakness is that it is difficult to realise insights relating to the causes or processes involved in the phenomena studied. There are in addition several sources of bias such as, the possibly self-selecting nature of respondents, and the point in time when the survey is conducted, and in the researcher themselves through the survey design.

Table 1. A Taxonomy of Research Methodologies, Galliers (1992), in Page, 1999. *Information Technology Impact: A survey of leading UK companies*, May 1999, <http://www.acs.bolton.ac.uk.htm>

Scientific / Positivist	Interpretivist / Anti-positivist
Laboratory experiments	Subjective / Argumentative
Field experiments	Reviews
Surveys ✓	Action research
Case studies	Case studies
Theorem proof	Descriptive / interpretative
Forecasting	Futures research
Simulation	Role / game playing

3.4 Survey Research

According to the current research objectives, it is intended to investigate existing values held by people from different cultural (national) backgrounds in the context of business to business relationships. In order to determine the customer's perceived value and how this might be influenced by culture, a questionnaire has been developed based on extant literature. This empirical investigation of the potential influence of culture on perceived value aims to determine how INEOS Silicas should tailor its marketing strategy to customers based on their cultural values.

To ensure the research is conducted appropriately, the questionnaire design is constructed according to Fink's (1995) attributes of 'best practice' (in Page, 1999). Questionnaire results are analysed using frequency analysis and Trellis plots. Findings are compared and contrasted with the literature discussed in Chapter 2, in order to ascertain agreement, or disagreement, with the extant literature.

3.4.1 Advantages of the chosen instrument

The study uses a self-administered questionnaire (Saunders et. al. 2003, p. 280). The rationale for this is that given the location and geographic area covered by this study (viz. 4 countries in Asia); a questionnaire is a time and cost – efficient research instrument. In addition questionnaires are familiar to most people and easy to administer, so lend themselves to a broad range of respondents. They can also reduce bias as question presentation is uniform and the influences of the researcher's own opinions on respondent's answers are reduced.

Finally, as the study requires responses from fairly senior managers, questionnaires offer a less intrusive means of access than telephone or face-to-face surveys and, unlike these other research methods, the respondent is

free to complete the questionnaire according to their own timetable (Page, 1999).

3.4.2 Disadvantages of the chosen instrument

Possibly the greatest enemy of research survey is poor response rate. It is reported that it is common for survey response rates to be around 20% (Burgess, 2001). The study, therefore, must be well designed to produce a high response rate in order to gain sufficient data for meaningful analysis.

Another disadvantage is an inability to probe responses. As structured instruments, questionnaires allow the respondent little flexibility with respect to response format. In essence, the 'flavour of the response' is lost. Providing space for respondents to comment can partially overcome this, and often these comments provide insightful information that might otherwise have been lost.

Using questionnaires also fails to capture visual cues, such as gestures, that might give further insight to issues. This lack of personal contact will likely not affect studies requesting factual information, but those probing sensitive issues or attitudes may be severely affected.

The present study aims to explore peoples' attitudes and expectations. It will therefore be limited by lack of personal contact. In the instrument design, effort has been made to cover the main aspects of value affecting business-to-business relationships through a thorough literature research, as well as a pilot study of the questionnaire.

A potential source of error in questionnaires is the possibility that the respondent is not actually who was intended. The questionnaire might be handed to others for completion. Whilst using e-mail might reduce the possibility for this error, absolute traceability is not assured. This is a confounding error inherent in questionnaires.

Finally written questionnaires might not be suited to some people, for example those who might be turned off by written questionnaires because of past experience of misuse.

3.4.3 Population and Sample

The *population* is all members of the group defined in keeping with the objects of the study. It is incumbent on the researcher to clearly define the target population.

A *sample* is a subset of the population chosen because access to all members of the population is prohibitive in time or other resources. A key issue in selecting the sample relates to the members chosen being representative of the population.

Sampling methods are classified either as *probability* or *non-probability*.

In probability sampling, each member of the population has a known non-zero probability of being selected. Probability methods include random, systematic and stratified sampling.

In non-probability sampling, members are selected in some non-random manner. Methods include convenience, judgement, and quota and snowball sampling.

The advantage of probability sampling is that *sampling error*, the degree to which a sample might differ from the population, can be calculated. Results can then be reported plus or minus the error. In non-probability sampling, the degree to which the sample differs from the population remains unknown.

3.4.3.1 The population and sample

In this study, the population is defined as INEOS Silicas' Asian dental customers. This encompasses 9 customers located in 4 countries: China, Indonesia, Japan and Korea. Because of the small number of participants, the study includes all members of the population and therefore forms a census.

Because the researcher has elected to conduct a census, the use of sampling methods (Saunders et. al. 2003, p. 150) is not appropriate to the study.

Cross-cultural research usually requires comparable samples, which involves drawing *matched* samples from identifiable subgroups of populations (Huang and Tai, 2003). In the present study the non-probability method of judgement sampling is used to select respondents. Focus is made on company buyers, or other key decision-makers, who deal with the selection and approval of suppliers of silica products. These were selected as arbiters for supplier selection and therefore as the most appropriate persons to approach as respondents.

3.4.4 Distribution and Collection of the Questionnaire

Individuals were selected for the survey through discussion with INEOS Silicas' sales and marketing teams. Discussions were held 4-weeks ahead of the date at which covering letters were distributed. These were followed up with an E-mail 1-week ahead of distribution of the questionnaire, confirming the purpose of the survey.

Two-days before distribution of the questionnaire respondents were sent, by E-mail, a cover letter explaining the purpose and form of the survey (Dillman, 2000 in Saunders, p. 305).

E-mail was selected as the form of communication to reduce response times, to allow a wider range of respondents to be accessed, and to minimise errors associated with the possibility that parties other than the intended respondents might complete the questionnaire.

No incentives were offered to complete the survey, other than a promise to provide a summary of the report's findings.

Return of questionnaires was monitored, with a single reminder being required to complete collection.

Analysis of the returned questionnaires was used to formulate a number of questions for subsequent telephone discussion aimed at establishing if the results concurred with respondents' views. The purpose was to test the accuracy of interpretation made of the responses by the researcher.

3.4.5 Triangulation - Telephone interviews

Interviews were conducted by telephone following distribution of questions formed from analysis of questionnaire responses. Questions were sent by E-mail one week ahead of the calls. Interviews were held over a 2-day period in the presence of two sales managers in the region. Pre-booked dates and times were arranged.

These interviews were designed to triangulate findings from the survey and to test conclusions from these.

3.4.6 Questionnaire design

Key elements of the questions, question type, layout and sequence were designed on the basis of extant literature.

3.4.6.1 Formulation of questions

Key elements of the questions were derived from the research aims (Chapter 1) and review of the extant literature (Chapter 2). The mechanism followed that described by Burgess (2001).

Questions on value were presented as ‘closed questions’, using both ranked (Likert scale) and rated responses. The purpose of using two different types of response was firstly to elicit the relative importance of different aspects afforded by suppliers, and secondly to determine the business environmental factors most affecting customer’s businesses.

The approach intended to avoid a prevalence of ‘high’ importance being scored for every question asked.

3.4.6.2 Determination of cultural dimensions

The general instrument used in cultural surveys is the ‘Value Survey Module 1994’ (VSM 1994; see Hofstede, 1994). This instrument is a revision of an earlier questionnaire based on questions used in the original IBM research (Hofstede, 2001).

The instrument follows a strategy of matched samples (Hofstede, 1991; Huang and Tai, 2001). This means instead of trying to draw representative samples from whole populations, or regions, of the cultures involved, a narrow survey is made focused on people who have different nationalities, but similar positions of responsibility within their society or respective organisations. The advantage of

this approach is that many possible sources of variation that are not of specific interest to the study, such as age or gender, are limited (Huang and Tai, 2001).

Whilst the common practice is to use VSM 94 in cross-cultural studies, discussion with INEOS' sales and marketing heads and academic tutors concluded this would not be an appropriate instrument to use in the present study.

This conclusion was reached on the basis of guidelines concerning appropriate use of the VSM 94 (Hofstede, 2001). These guidelines suggest significant errors are associated with applying the instrument to individuals from different employers. In addition it is asserted that VSM 94 is aimed at comparing countries and meant for use at country, or regional, level. The minimum number of respondents per country (or region) is indicated as 20. Below this, the influence of individuals becomes too strong. The ideal number of respondents is reported as 50.

The scope of the present study covers a number of different employers. This rules out the appropriateness of the instrument on the basis of significant errors expected from comparing individuals from different employers. The number of respondents per country is less than the minimum number of 20 indicated as important to overcome the influence of individuals. For these reasons the VSM 94 was rejected as an appropriate instrument for the study.

Nevertheless, the strategy of matched samples may be expected to yield estimates of differences between the nationalities included. In the present study, as described earlier, focus is made on individuals closely associated with the approval and selection of suppliers. These are in the main 'buyers' who hold similar positions within their respective organisations.

3.4.6.3 Questionnaire translation

Huang and Tai (2003) recommend that a procedure of ‘back-translation’ be used to help translate questionnaires into local languages. A request was made asking sales managers in the region to perform such translation. Unfortunately, time forbade written translation. Questionnaires were therefore circulated in English and sales managers assisted respondents when asked to translate. This process may have influenced interpretation of questions by respondents, through the sales managers’ understanding, but could not practically be avoided.

3.4.6.4 Pilot study

Formulation of the questionnaire comprised a number of drafts. These were formed by circulation to a few members of INEOS Silicas’ sales and marketing teams. An example of an initial draft is shown in Appendix 1.

Based on feedback, the questionnaire was modified.

The first page comprises a cover note explaining the background to the study, its purpose, aspects of the questionnaire and scope.

The second page provides guidance notes to complete the questionnaire. The Likert scale gave rise to some confusion initially, some respondents in the pilot ranking values in order of importance by entering numbers into the boxes. This was corrected following advice from the researcher’s tutor(s) to include a ‘worked example.

The questions forming the study are placed into appropriately labelled sections within the questionnaire. The first section ‘*questions on product features*’ (Q1-Q3) contains questions relating to the environment, cost and quality. This information is

required to determine which aspects of these components are perceived by the customer to add value.

Section 2 of the questionnaire (Q4-Q9) is concerned with aspects provided by suppliers, outside the simple product offering. This information is required to test the assertion of Maklan and Knox (1997) that value is formed by provision of benefits outside the normal brand offering.

Section 3 '*relative importance of categories explored*' is intended to draw out the respondents' perception of the relative value of each of the earlier elements. Product quality is not included in this section as this, according to the sales team members consulted, is 'a given'.

The final section '*cultural factors*' concerns the demographics of the respondents. This information is required to be able to compare results with findings from de Mooji (2000) and Hofstede (1991) relating to cultural values.

Once completed, the questionnaire was subjected to a further pilot comprising the same individuals as earlier. Litwin's checklist (1995; in Page, 1999) was used to analyse the results. One minor correction was required: the descriptor "solidarity" was replaced by "supplier support" as a view was expressed that the original term might hold different connotations for different people. Appendix 2 reports the final questionnaire.

Litwin (1995; in Page, 1999) offers a means to assess the effectiveness of a research instrument. Measure of effectiveness is based on the validity of the *content, construct and criterion* within the study context.

For the present study it can be reported that the use of a pilot study to refine the instrument resulted in improvements in terms of content, appearance and descriptors.

According to Litwin (1995; in Page 1995), the validity of the construct is only determined after a number of years experience with the survey instrument. The present study uses a newly constructed instrument and therefore does not meet this measure.

Finally, criterion validity is demonstrated by the elements forming the questionnaire which are derived from the extant literature and thus fit the research aim.

3.5 Ethical considerations

In the context of research *ethics* refers to the appropriateness of behaviour in relation to the rights of those who become the subject of the study, or are affected by it (Saunders *et.al*, 2003).

The appropriateness of behaviour will be affected by broader social norms of behaviour (Zikmund, 2000, in Saunders *et.al*, 2003). In the present study the concept of a 'social norm' must be applied across different cultures.

Ethical considerations in the present study focus on an assurance of anonymity given by the researcher to respondents. Responses reported therefore do not provide detail of the respondents.

Further, triangulation of the findings through telephone discussion of the research findings with the respondents before formally reporting these provides assurance that dubious data is not included in the study analysis.

Chapter 4

Analysis of Data

4.1 Introduction

This chapter provides analysis of respondents' answers to the questionnaire in terms of the questionnaire components. General observations are made of the findings and tentative conclusions presented. The findings are examined with respect to the extant literature in Chapter 5, where a more complete discussion of the research is provided in the context of existing knowledge and information.

The chapter begins by summarising the response rate for the census and provides demographic information of respondents. This helps put the questionnaire into context within the industry.

Next, analysis from the research is presented highlighting the perceived relative importance of the components forming the questionnaire, with the aim of answering the first research question:

- What are the essential components that INEOS Silicas' Asian dental customers value?

This is followed by more detailed analysis of each of the components to identify which factors making up the components have greatest influence on their relative importance.

Further analysis that compares the responses of different nationalities to the value elements is then presented. This aims to answer the second research question:

- Does national culture affect the essential components of value explored in by the study?

Finally summary of the research findings is made as a basis for Chapter 5, wherein a discussion examining these within the context of the conceptual model and extant literature is presented.

Answers to these form the basis of fulfilling the research objectives and formulation of recommendations concerning outcomes from the study.

Raw data from the survey and used to report results is given in Appendix 3.

4.2 Response rates and Demographics of Respondents

Table 2 shows the response rate to the census. The initial distribution resulted in 6 completed questionnaires being returned - a response rate of 67%. A follow-up reminder increased the total to 9 - a final response rate of 100%.

Table 2. Response rate to the census.

	Initial Response	Response to a reminder	Final Total
Number of Questionnaires returned	6	3	9
% of Total Questionnaires	67	33	100

Table 3 shows characteristics of the respondents. The majority of participants are located in South Korea and Japan, followed by The People’s Republic of China then Indonesia. The participants are nationals of the respective countries in which they are located. The Anglo-Dutch Company operates in both China and Indonesia. Information on the participants’ length of service ranges from 8 to 21 years.

The study was aimed at company buyers to focus directly on important decision-makers. Questions of gender were excluded out of respect for the position.

Table 3. Characteristics of respondents

Country	Respondents' details		
	Nationality	Company nationality	Length of service
People's Republic of China	Chinese	Anglo-Dutch	8
People's Republic of China	Chinese	Chinese	Not provided
South Korea	Korean	Korean	16
South Korea	Korean	Korean	12½
South Korea	Korean	Korean	15
Japan	Japanese	Japanese	11
Japan	Japanese	Japanese	10
Japan	Japanese	Japanese	15
Indonesia	Indonesian	Anglo-Dutch	21

4.3 Analysis of the relative importance of questionnaire components

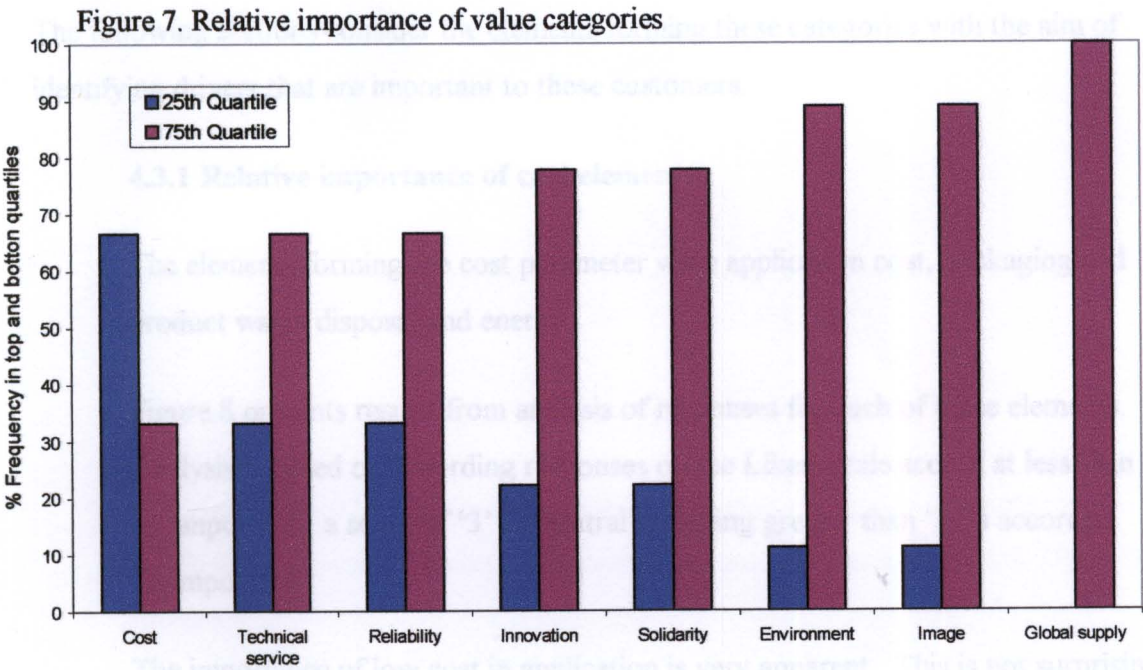
Having achieved a 100% response rate for the census an analysis of the returns is undertaken. This section aims to identify the essential components that INEOS Silicas' Asian dental customers value, and so answer the first research question.

Figure 7 reports the relative importance placed by the respondents on the categories explored by the census. The results are ranked according to frequency rate at which the category appeared in the top (25th) and bottom (75th) quartiles.

The results show that cost is valued more highly than any other factor. This is followed by technical service and supplier reliability. Supplier image, environmental factors and global supply capability lie at the bottom of the ranking, the latter in fact never appearing in the top quartile. Innovation and customer support lie in the top quartile only 20% of the time.

Considering the application in which the silica is used, the findings reflect quite well industry pressures in the region. A number of players aggressively compete for share of the oral care market in Asia, in particular toothpaste, driving down cost. However the technical, and regulated, nature of toothpaste means technical support is essential to

enable new, or even mimic, formulations to be brought forward to compete effectively. Thus, a producer may have 'whitening' toothpaste within the brand portfolio against which others wish to compete. Formulation and development requires technical support that might not be easily available to the toothpaste producer. Support might therefore be sought from ingredient suppliers.



Competitive pressure requires a reliable supply chain, hence the top three position of reliability in the ranking.

To compete effectively requires either differentiation or lowest cost, both of which benefit from innovation. As with formulation development, support from innovative suppliers can provide a competitive edge so that these together are ranked evenly in the census. Put together these would outrank technical service and reliability.

The environmental factor scores low as for this business this is essentially concerned with waste disposal in the form of packaging. The pressures on this might differ between countries in the region so that the combined scores result in an overall low ranking.

Supplier image is an interesting factor in that the consumer is, in this case, the toothpaste producer. This party is more concerned about their own image / brand image than their supplier's. Finally global supply was not ranked at all in the top quartile; possibly because the players in the market do not themselves have a global presence.

The following sections consider the elements forming these categories with the aim of identifying drivers that are important to these customers.

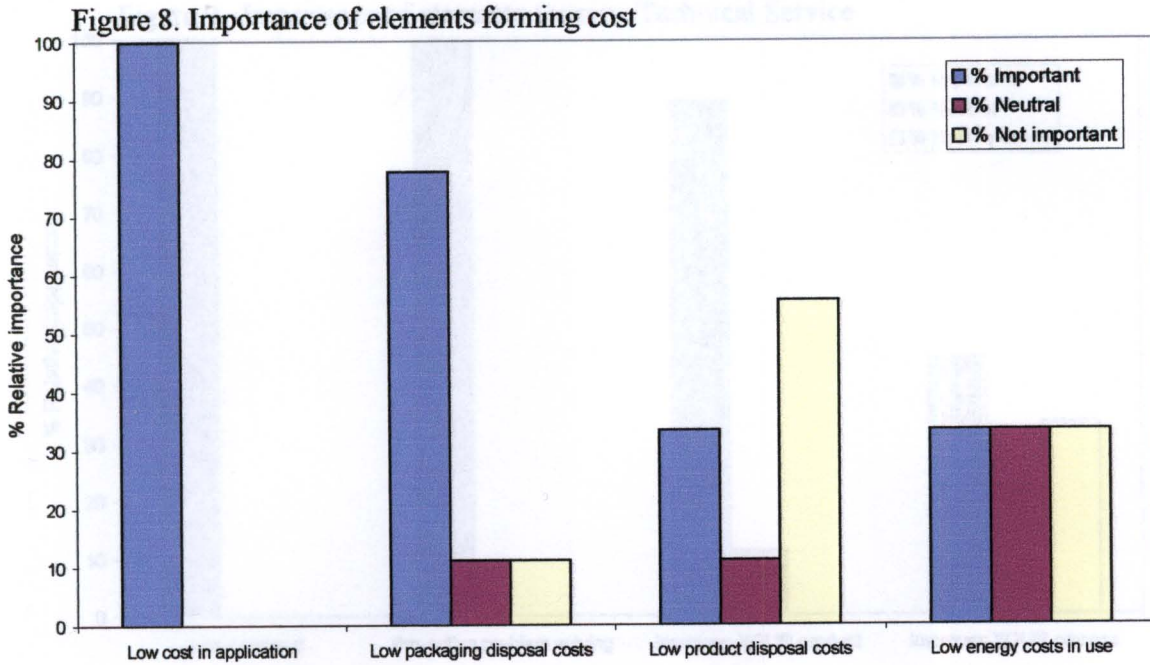
4.3.1 Relative importance of cost elements

The elements forming the cost parameter were application cost, packaging and product waste disposal and energy.

Figure 8 presents results from analysis of responses for each of these elements. Analysis is based on according responses on the Likert scale scored at less than '3' as 'important', a score of '3' is 'neutral' anything greater than '3' is accorded 'unimportant'.

The importance of low cost in application is very apparent. This is not surprising, as in the competitive environment any savings are important. Packaging disposal costs are ranked second, with nearly 80% importance ranking. Low product disposal costs is deemed unimportant, whilst the significance of low energy costs is evenly distributed across the categories. Given that the product is wholly consumed in the application, it is sensible that its disposal costs are unimportant.

Incorporation of the silica into the formulation might involve different degrees of difficulty between the respective toothpaste producers. Some might require longer mixing, or more heating, or some other undefined parameter that affects energy cost. Thus, the energy factor could have a different impact on the process for different producers hence the even spread across relative importance.

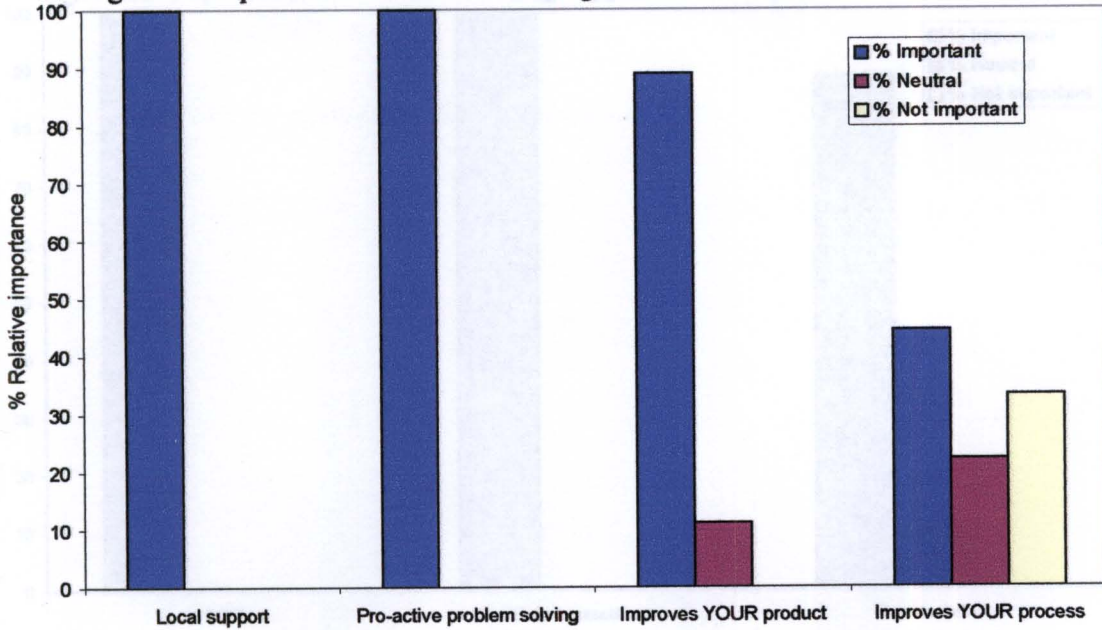


4.3.2 Relative importance of technical service elements

Local support, pro-active problem solving and support to improve customer's products are perceived as highly important aspects of technical service, Figure 9. Improvements to the customer's process were deemed much less important than these factors.

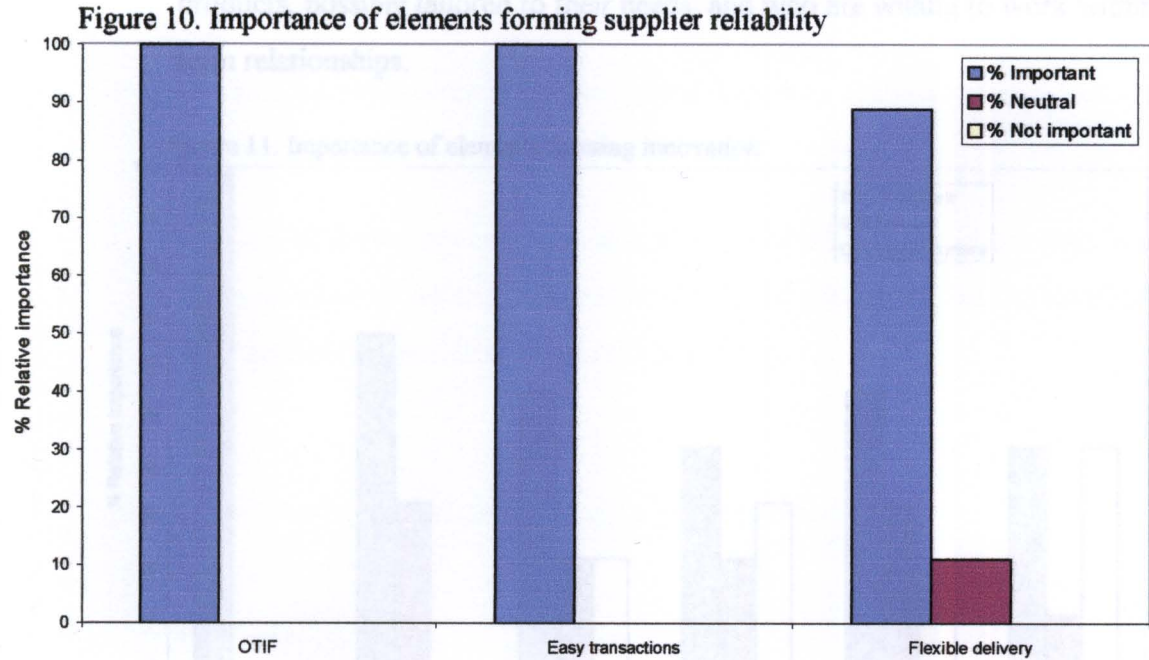
Customers appear therefore to value close, innovative, support from their suppliers.

Figure 9. Importance of elements forming Technical Service



4.3.3 Relative importance of supplier reliability elements

All aspects of reliability are deemed important. Customers value 'on time in full deliveries', managed by 'easy transaction processes and supported by flexible delivery, Figure 10. All of these factors would be expected to go some way towards supporting the customer's planning and execution of business.



4.3.4 Relative importance of the elements in innovation and supplier support

Figures 11 and 12 summarise the relative importance to the participants of the elements forming innovation and supplier support factors respectively. Of greatest importance are continued product development and the forging of long term relations. Tailored products and innovative and flexible supply chains tie in with valued long-term relations. Suppliers willing to ‘go the extra mile’ in these elements would be regarded as favourable. The ability for suppliers to provide equivalent products to those offered by competitors is likely to be linked to competitive pricing.

Surprisingly, given the value afforded long term relations, the prospect of joint developments although valued does not rank highly in the participants’ requirements. Other factors in supplier support, tailored quality and working beyond the contract are also significantly important but flexible packaging, whilst being scored highly by some participants, was deemed unimportant by a significant proportion.

Overall the participants value suppliers who continually strive to deliver new products, possibly tailored to their needs, and who are willing to work within long term relationships.

Figure 11. Importance of elements forming innovation

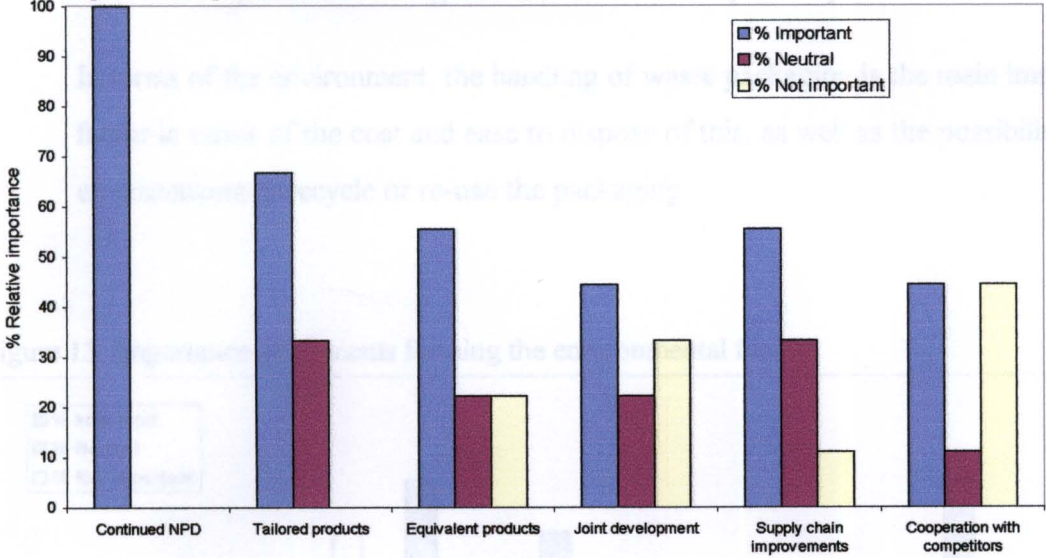
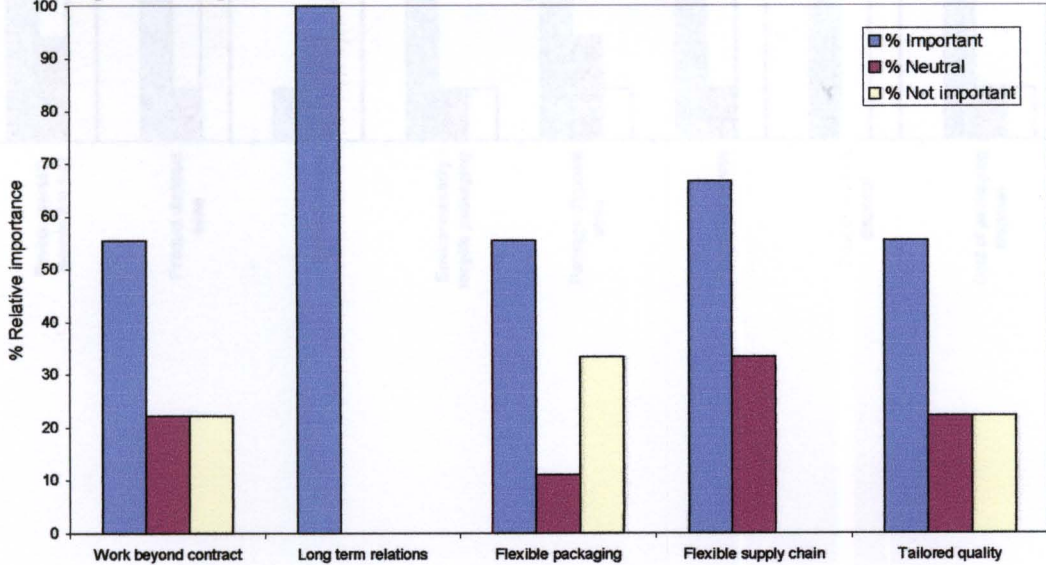


Figure 12. Importance of elements forming supplier support

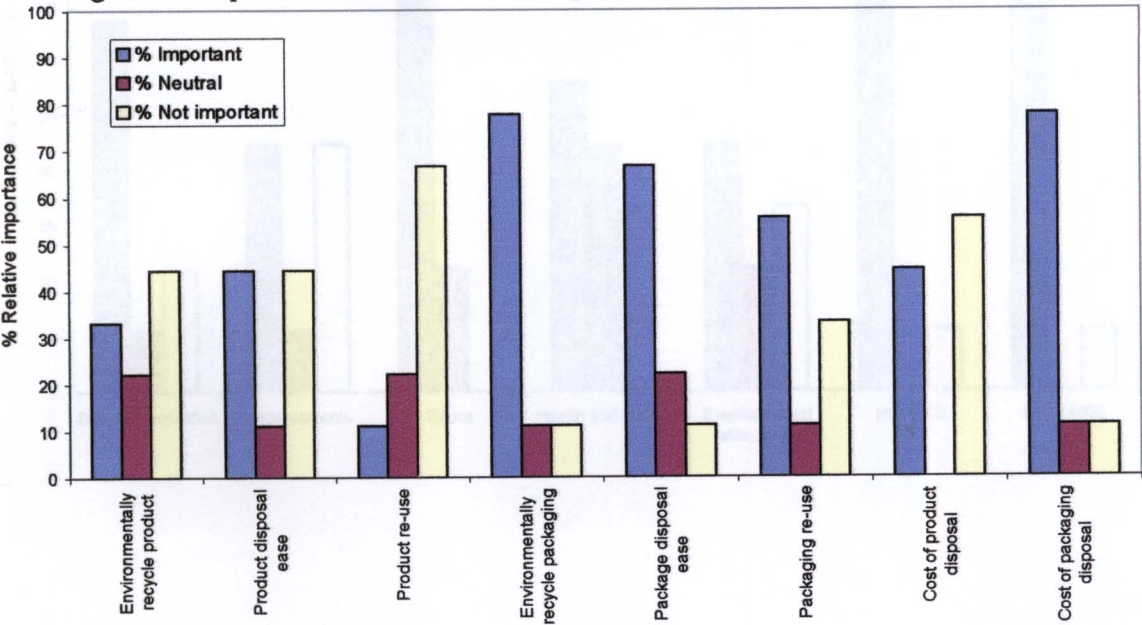


4.3.5 Relative importance of environmental, supplier image and supply capability factors

The relative importance of environmental, suppliers image and supply capability factors are summarised in Figures 13, 14 and 15 respectively.

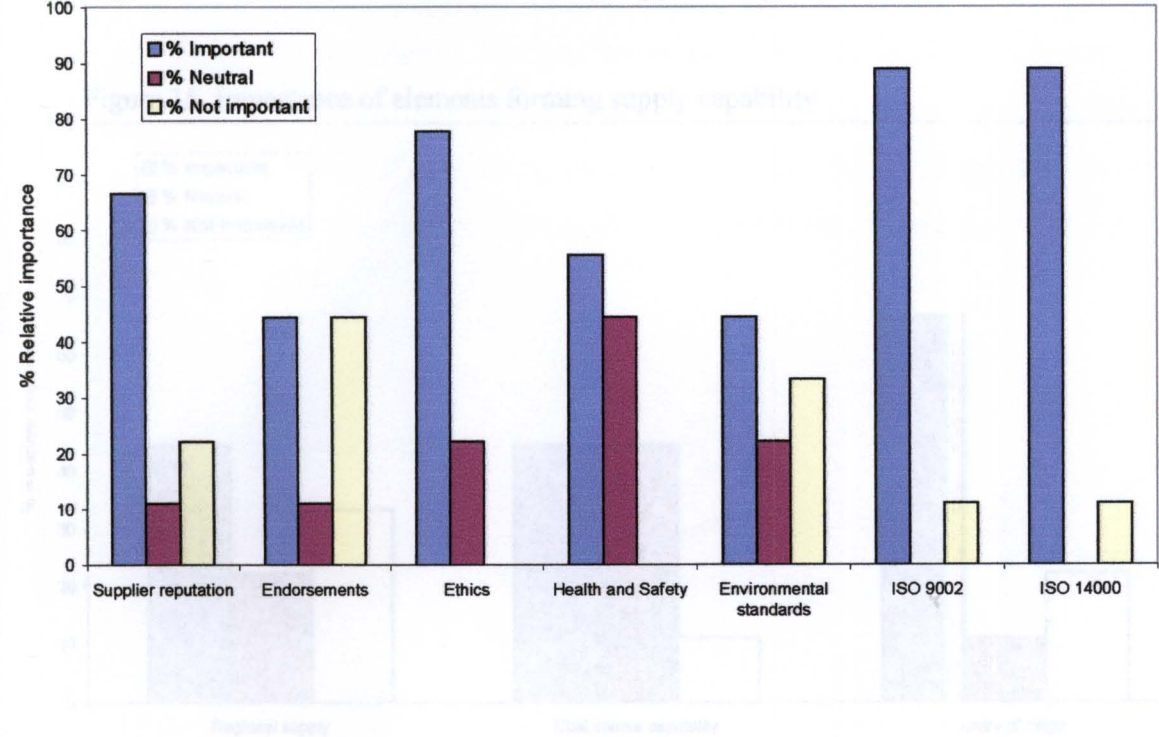
In terms of the environment, the handling of waste packaging is the main important factor in terms of the cost and ease to dispose of this, as well as the possibility to environmentally recycle or re-use the packaging.

Figure 13. Importance of elements forming the environmental factor



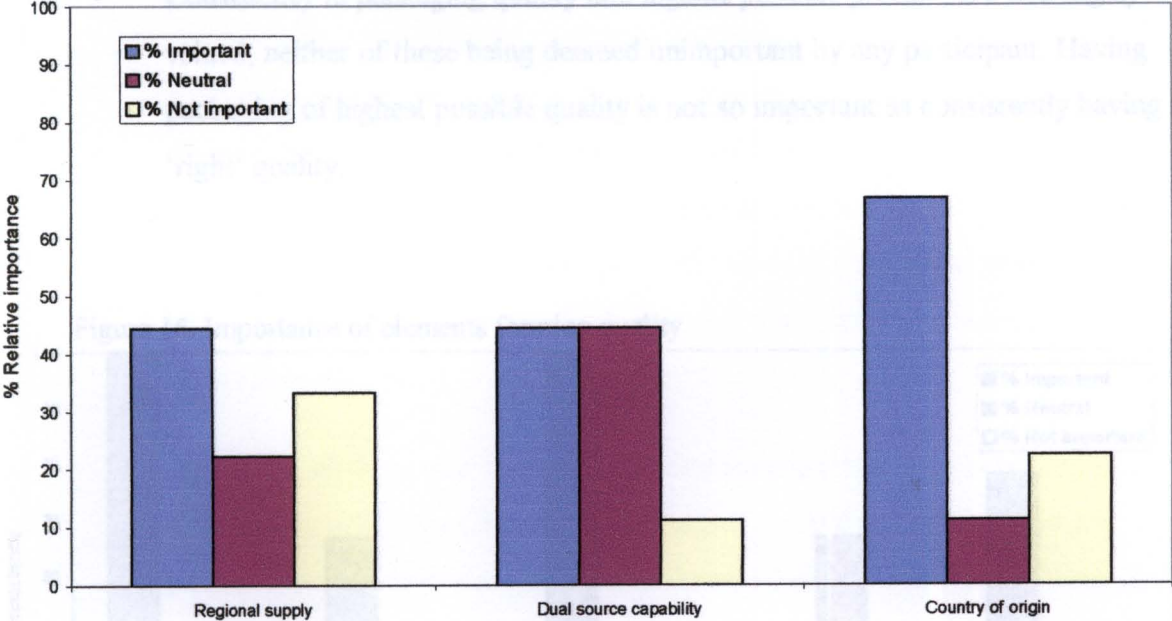
The importance of supplier image focuses on quality standards and ethics. Reputation is also important and it is likely that this is strongly linked to these other factors. Health and safety is also important and its score is interesting in that, like ethics, it was never regarded as unimportant. The remaining factors of environmental standards and endorsements are less valued.

Figure 14. Importance of elements forming supplier image



In terms of product supply capability and location, the country of origin ranked highest. When probed, this reflected the participants' perception of quality from a European-run company compared to other regions. Thus, although supply is available within the region from local (national) producers, there is a perception that quality from a European company is higher, including that which the company produces in Indonesia. Despite this perception, the value of having dual source capability is important.

Figure 15. Importance of elements forming supply capability



Overall in respect to the environment, image and supply the participants' value factors affecting packaging disposal, product quality (in respect to industry standards) and production from companies viewed as having policies of operation that affect these factors.

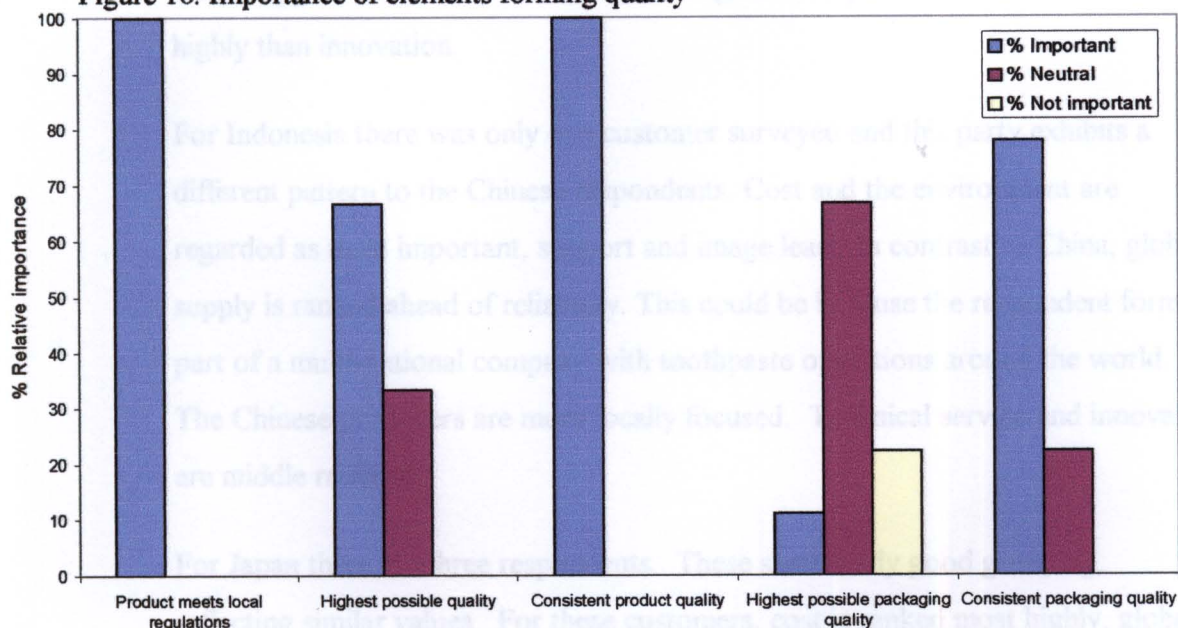
4.3.6 Relative importance of quality

In terms of the relative importance of categories explored in the questionnaire, product quality was taken as a 'given'. This decision came from discussion with stakeholders during the derivation of the questionnaire. To ensure this important parameter was not overlooked, questions on this were included. Figure 16 summarises findings for elements concerning quality.

For the participants, products must consistently meet local regulatory requirements (these are described by National Formulary or Pharmacopoeia standards).

Consistency in packaging quality and highest possible product are also highly valued, neither of these being deemed unimportant by any participant. Having packaging of highest possible quality is not so important as consistently having the 'right' quality.

Figure 16. Importance of elements forming quality



4.4 Comparison of responses within cultures

This section aims to explore if national culture affects the essential components of value explored in by the study, and so answer the second research question. As in section 4.3 each element and its component is explored.

4.4.1 Importance of factors within and between countries

Figure 17 shows a Trellis plot of the relative value of individual factors for each country. The plot displays relationships for the value elements on one page while distinguishing between different groups.

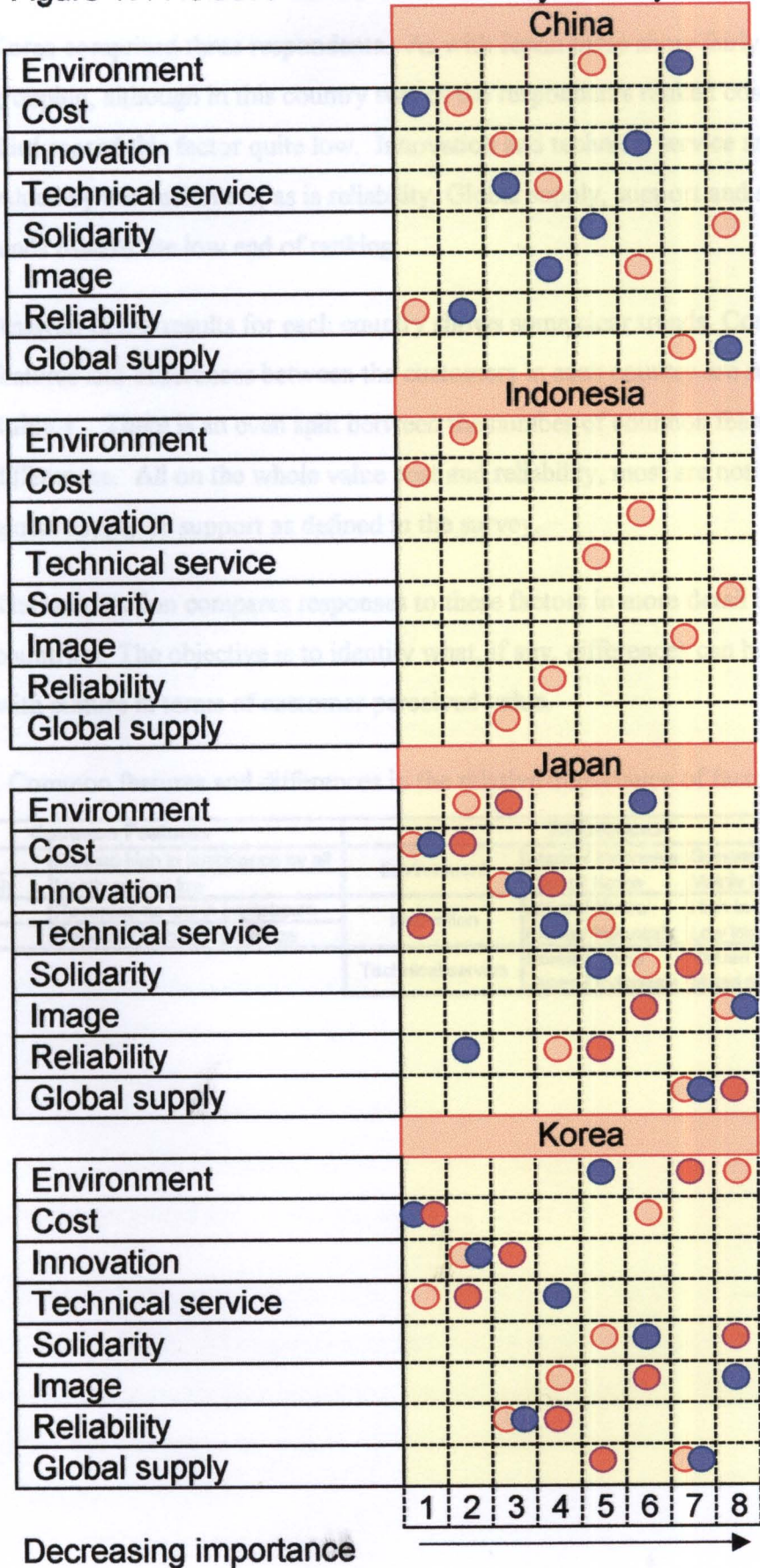
For China the respective respondents demonstrate, with the exception of innovation and support, good agreement, scoring the factors similarly. In this country the respondents regard cost and reliability as very important. Technical service is valued, image and the environment less so and global supply is relatively unvalued. For innovation, one respondent values this whilst the other values it less. Support is relatively unvalued, although one respondent ranks this more highly than innovation.

For Indonesia there was only one customer surveyed and this party exhibits a different pattern to the Chinese respondents. Cost and the environment are regarded as most important, support and image least. In contrast to China, global supply is ranked ahead of reliability. This could be because the respondent forms part of a multi-national company with toothpaste operations around the world. The Chinese producers are more locally focused. Technical service and innovation are middle ranking.

For Japan there are three respondents. These show fairly good grouping, reflecting similar values. For these customers, cost is ranked most highly, global supply least. As with China this could reflect the producers' regional focus. The environment is ranked highly by two of the respondents, less so by the third. All rate innovation equally high, but technical service is valued significantly more by one customer than the others. Reliability shows a similar pattern to technical

service, it being ranked more highly by one customer compared to the others.
Support and supplier image score relatively low for all of the respondents.

Figure 17. Relative value of factors by country



Korea comprised three respondents. As with Japan these show fairly good grouping, although in this country two of the respondents ranked cost highest, the third scored this factor quite low. Innovation and technical service are highly valued by the customers, as is reliability. Global supply, support and supplier image tends toward the low end of ranking.

Analysis of the results for each country shows some clear trends. Common features and differences between the customers in each country are summarised in Table 4. There is an even split between the number of common features and differences. All on the whole value cost and reliability, most are not interested in global supply or support as defined in the survey.

The next section compares responses to these factors in more detail between countries. The objective is to identify what, if any, differences can be associated with culture in terms of customer perceived value.

Table 4. Common features and differences in the relative importance of factors by country.

Common Features		Differences		
Cost	Ranked high in importance by all	Environment	Japan / Indonesia	Generally important
Global supply	Mostly ranked low		China / Korea	Mainly low
Support	Regarded as low in importance	Innovation	Japan / Korea	High in importance
Reliability	Generally high in importance		China / Indonesia	Low importance
		Technical service	Korea / China	Valued
			Japan / Indonesia	Mixed response

4.4.2 Importance of the elements of factors between countries

This section considers the relative importance of elements forming the factors examined in the survey. Responses to these elements are compared between countries to identify differences and common values held by the respondents.

Figure 18 shows Trellis plots for elements separately forming the cost and reliability factors.

Considering the cost elements, all respondents place high value on low product cost in application and the majority place high value on packaging disposal costs. Korea exhibits some differences between customers in respect to packaging disposal costs. This could be explained by the relatively low value afforded the environment factor by the Korean respondents (see Figure 13). Product disposal costs are regarded as unimportant by Japan and Korea, but important by China and Indonesia. Energy costs show little consistency within and between countries, being of importance to some customers but not to others.

Thus in terms of cost elements differences are seen between countries.

For reliability, all respondents place high value on all elements, no differences being identified between countries. On time in full deliveries with easy transactional systems and flexible delivery are valued by all of the customers.

Quality was not treated as a factor in the general survey because at least a minimum quality is required to do business. Elements forming quality were however explored and results are shown in Figure 19.

All respondents expect products to meet local regulations that dictate health and safety standards. All respondents value consistency in product and packaging quality more highly than having the 'highest possible quality'. There is little, if any difference between countries in respect to quality demands.

Figure 18. Cost and reliability elements

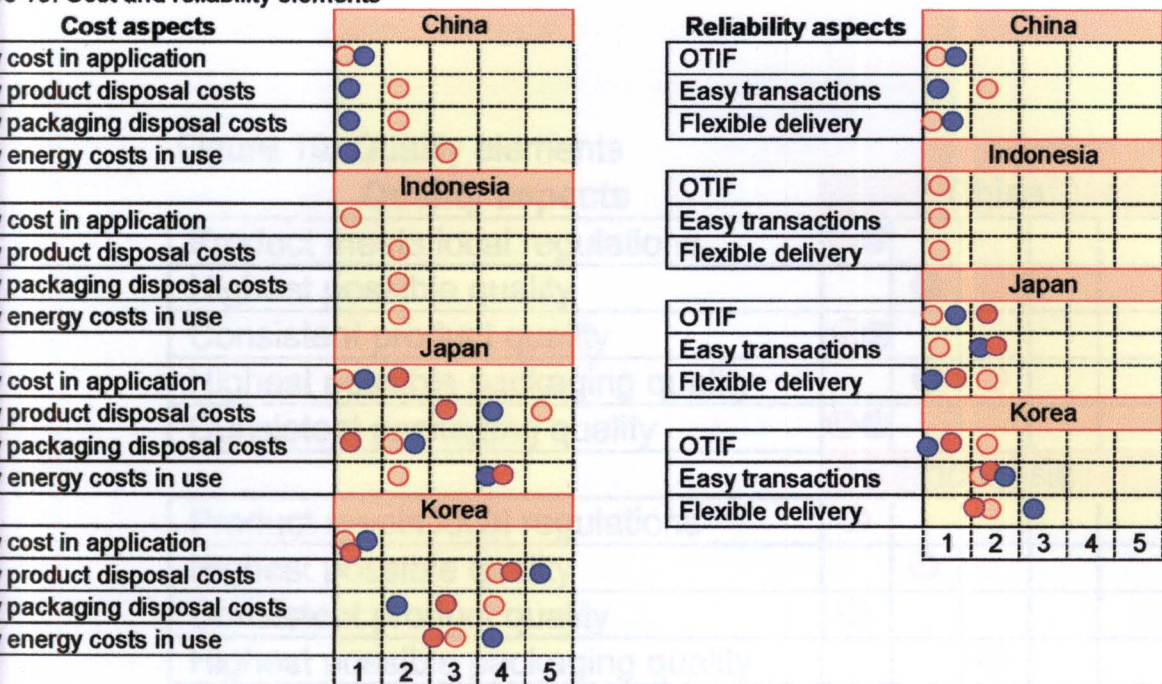


Figure 20 provides a summary of findings for innovation and technical service elements. These are grouped together as they represent a distinct investment decision for supplier companies in their business strategy.

Common between countries is a desire that suppliers exhibit continued new product development that might include tailored products for their businesses.

Figure 19. Quality elements



Figure 20 provides a summary of findings for innovation and technical service elements. These are grouped together as they represent a distinct investment decision for supplier companies in their business strategy.

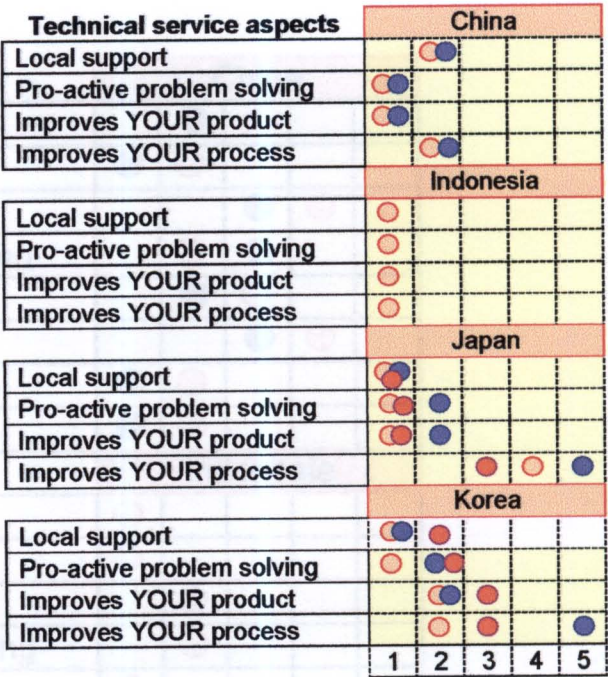
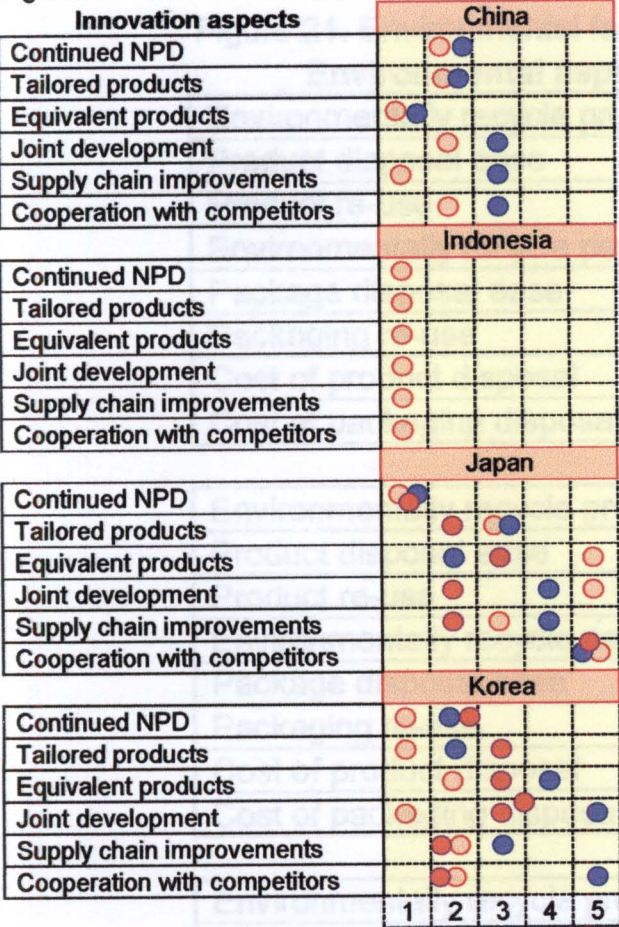
Common between countries is a desire that suppliers exhibit continued new product development that might include tailored products for their businesses.

Essential differences between countries include value being placed by Indonesian and Chinese customers on suppliers producing equivalent products to their competitors. Japanese and Korean customers exhibit mixed responses to this factor. Joint development activities show no pattern either within or between countries. These are subject to individual company's approach to suppliers. Co-operation with competitors too exhibits little pattern, although in Japan all respondents view this as unimportant. In Korea response ranges from important to unimportant and in China response extends for neutral to very important. The Indonesian customer simply ranked everything to do with innovation as very important.

Considering technical service aspects, there is little difference in emphasis between any of the customers in any of the countries. All respondents value pro-active problem solving, product improvements and local support. Less valued is process improvement.

Overall respondents value new product development that includes tailored products and in the case of China, Indonesia and Korea, products that are equivalent to competitor offerings. Japan appears to place greater emphasis on new product development. There appears to be value across all countries in local technical support for product (toothpaste) improvements.

Figure 20. Innovation and technical service



Responses to elements forming the environmental factor are summarised in Figure 21. On the whole grouping within countries is poor, but overall disposal of packaging, in terms of cost or ease, appears to be of most importance to the respondents. Japan places higher emphasis on recycling than the other countries, all three respondents scoring this high. Product re-use or disposal tends to be of low importance, most likely for reasons given earlier concerning the product application and an expectation that product quality is right so that waste is minimal.

Overall value concerning environmental elements lies with packaging disposal. In Japan emphasis is given to recycling, for others emphasis is on cost. This might reflect local, national, pressures rather than regional pressures.

Figure 21. Environmental factors

Environmental aspects	China				
Environmentally recycle product		●	○		
Product disposal ease	●	○			
Product re-use			●	○	
Environmentally recycle packaging		○	●		
Package disposal ease		●	○		
Packaging re-use			●	○	
Cost of product disposal	●	○			
Cost of packaging disposal	●	○			
	Indonesia				
Environmentally recycle product	○				
Product disposal ease	○				
Product re-use		○			
Environmentally recycle packaging		○			
Package disposal ease	○				
Packaging re-use	○				
Cost of product disposal	○				
Cost of packaging disposal	○				
	Japan				
Environmentally recycle product	○			●	○
Product disposal ease	○			○	●
Product re-use			○		●
Environmentally recycle packaging	○	●			
Package disposal ease	○	●		○	
Packaging re-use	○	○	●		
Cost of product disposal		○			○
Cost of packaging disposal	○	○	○		
	Korea				
Environmentally recycle product			○		○
Product disposal ease			○		○
Product re-use				○	○
Environmentally recycle packaging		○	○	○	
Package disposal ease	○	○	○		
Packaging re-use		○		○	○
Cost of product disposal				○	○
Cost of packaging disposal	○		○	○	
	1	2	3	4	5

Elements comprising supplier image, non-technical support and global supply are shown in Figure 22.

Considering image, supplier ethics and ISO (quality) standards are valued most by customers in each country. Health and safety, and environmental standards score higher in importance in China and Indonesia than in Japan or Korea. Supplier endorsements appear to carry less weight in Japan than any of the other countries.

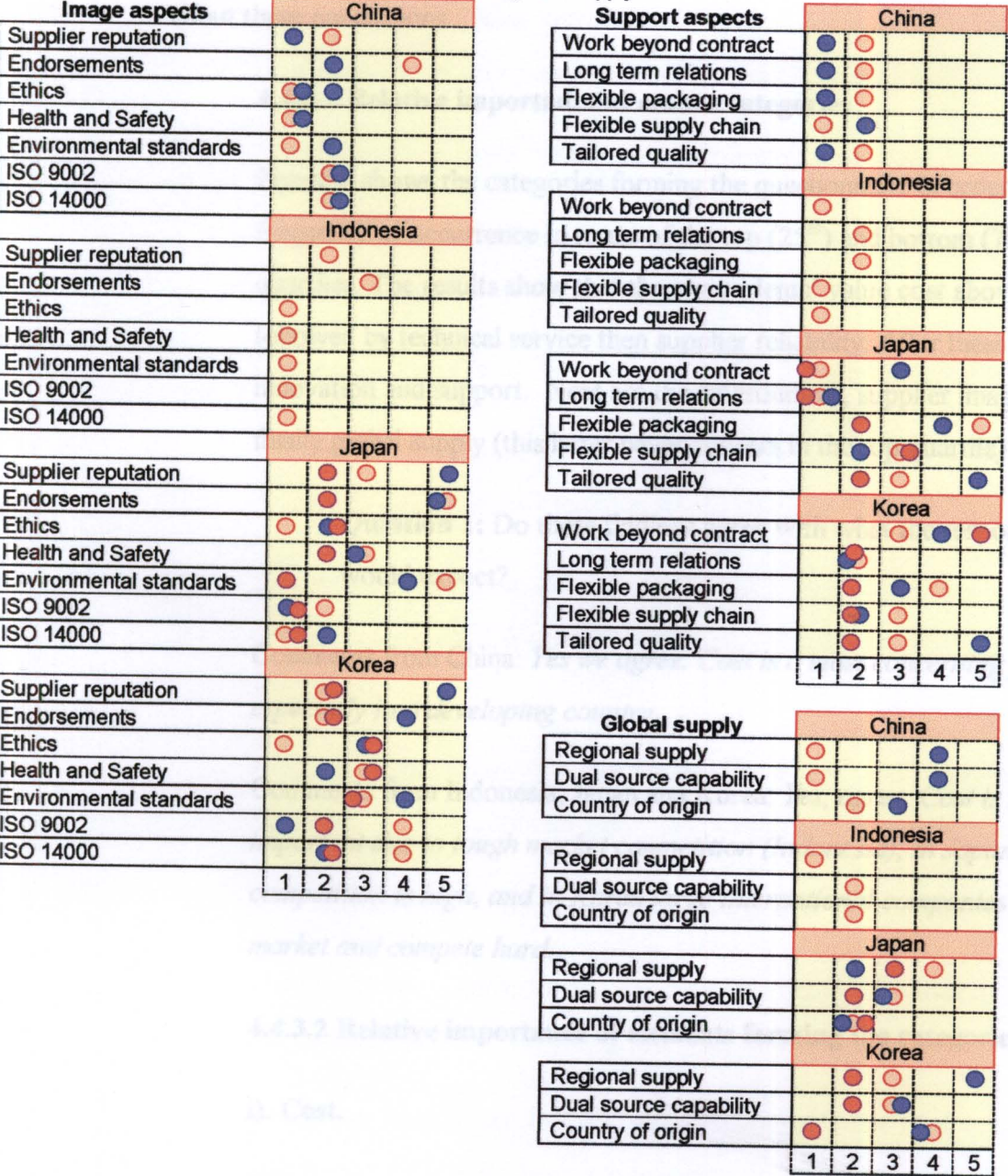
In terms of customer support, working beyond contract and long term relations has higher value in China and Japan than Indonesia or Korea. Supply chain flexibility and tailored quality are valued highly in China and Indonesia, and while being important in Japan and Korea appear to be less so. Beyond these, Japan and Korea show very similar response patterns to each other, giving similar responses to the other elements. China and Indonesia compliment each other in their responses to these elements.

Looking at responses to global supply, differences are apparent within and between countries. Overall, regional and dual supply, with some emphasis on country of origin, is rated as highest in importance. In China one respondent considers regional, dual source capability as very important, the other regards these as unimportant. These are closer when the country of origin is considered, although one is at best neutral. The Indonesian customer places value in regional supply, dual source capability and appears to value a particular country of origin. Country of origin is highly important to one Korean customer, but rated as unimportant by the others.

In all countries supplier ethics and ISO standards are important, as are long term relations, flexibility with regional supply and tailored quality. Overall the pattern of response suggest similar values between Japan and Korea on the one hand, and China and Indonesia on the other.

Some conclusions emerge from analysis of the elements forming the factors probed by the census and these have been indicated during the analysis. To test the validity of these conclusions, a summary of these was sent to the region and discussion held to ask if the interpretations were correct and for reasons why the elements were valued. The following section summarises these discussions.

Figure 22. Supplier image, non-technical support and global supply



4.4.3 Discussion of questionnaire analysis

Following analysis of questionnaire responses a number of conclusions were reached concerning the outcomes. These questions were put to customers to check the accuracy of the findings. This section reports discussions conducted about these conclusions.

4.4.3.1 Relative importance of census categories

Figure 7 shows the categories forming the questionnaire in order of their frequency of occurrence in terms of the top (25th) and bottom (75th) quartiles. The results show that the respondents' value cost above all else, followed by technical service then supplier reliability. After these come innovation and support. Next are the environment, supplier image and finally global supply (this latter never appears in the top quartile).

Question 1: Do these findings agree with what the respondent would expect?

Comments from China: *Yes we agree. Cost is a most concerning factor, especially in a developing country.*

Comments from Indonesia, Japan and Korea: *Yes, agree. Cost is the most important due to tough market competition (Indonesia), in Japan competition is high, and in Korea large international companies enter our market and compete hard.*

4.4.3.2 Relative importance of elements forming the categories

i). Cost.

Figure 8 examines the elements of cost. Here the results are expressed as 'important', 'neutral' or 'unimportant' based on responses to the

questionnaire. The results show that 'cost in use' is in the top quartile 100% of the time. Low packaging disposal costs come next in importance. Low energy and disposal costs are overall unimportant (neutral and unimportant).

Question 2: Do the overall findings agree with what you'd expect?

Comments from China, Indonesia and Korea: *Yes, agree. Factors that affect product cost are important, others are less important.*

Comments from Japan: *Yes agree. Cost is most important as said before.*

Question 3: Why are packaging disposal costs important: Is this a significant cost in the region?

Comments from China: *No it is not a big cost, but is increasing.*

Comments from Indonesia: *This is not a big cost, product delivered here by INEOS Silicas in bulk tankers, so not important here.*

Comments from Korea: *No, not for INEOS Silicas' competitors as they deliver in bulk. INEOS is small sacks can, for some products, be significant.*

Comments from Japan: *Not significant, 1% or less. But is increasing and becoming the level that can affect low margin products.*

Question 4: Does the region have pressures on waste disposal?

Comments from China, Korea: *Not now, as pressures are not applied in these countries, but is becoming more popular and is being considered.*

Comments from Japan: *Yes, and getting stronger. Most companies in Japan meet ISO 14001 and zero emission is becoming our mission. Waste is not allowed and every disposal needs to be recycled.*

ii). Technical service

Figure 9, shows results for technical service. The results show that local support and active problem solving are important 100% of the time. Product improvement is also highly valued, while process improvement is much less valued.

Question 5: Do the results reflect your view?

Comments from all: *Yes, agree.*

Question 6: Why is local support and problem solving valued, are these expected of suppliers?

Comments from China, Korea and Indonesia: *Help with solving problems is highly valued. (Sales manager view: Customers can even ignore slightly higher cost for product if help is given solving problems). It is a culture to value help.*

Comments from Japan: *Local support can support quite closely without a language barrier and is easy to contact in respect to time. Problem solving is always valued.*

iii). Supplier reliability

Figure 10 shows that 'on time in full' deliveries and easy transactions score highly 100% of the time. Flexible delivery too is valued.

Question 7: Do you agree with these findings?

Comments from China: *Yes. JIT (just in time) is important to keep inventory costs low.*

Comments from Indonesia: *Yes. Bulk deliveries fill our silos so we expect OTIF to meet our forecasts. It's always best to make business easy.*

Comments from Korea: *Yes, not sure why the question was asked. We expect OTIF. Storing bags is a problem, INEOS Silicas' competitor can deliver in bulk so INEOS must manage the supply chain well to compete.*

Comments from Japan: *Yes agree. Regarding delivery we expect the distributor to respond to various delivery requests in the terms of package, volume, etc.*

iv). Innovation.

Results for innovation, Figure 11, show that new product development scores highest, followed by tailored products and supply chain improvements. Equivalent products are next, while joint developments and co-operation with competitors is less valued.

Question 8: Do the findings agree with your view?

Comments from China, Indonesia and Korea: *Yes, agree.*

Comments from Japan: *Yes we like INEOS as they have been developing new products much more than competitors.*

Question 9: Do you demand new products? If so, why?

Comments from China: *Yes. These can help reduce costs when they are better performing.*

Comments from Korea: *Yes, better products are always expected to enable the creation of new markets, and to fight imported brands.*

Comments from Indonesia: *Yes. Improved products help to grow the market and to compete more effectively with new formulations.*

Comments from Japan: *Yes, to improve the toothpaste product to meet consumer's demand.*

Question 10: Is there a demand for equivalent products?

Comments from China and Indonesia: *Not too much. New products are always expected as a better performer or cheaper.*

Comments from Japan and Korea: *Not so much. We compete by feature / performance of our products to add value and increase money. Therefore new products are always preferred.*

v). Supplier support.

According to the analysis long term relationships are highly valued, always scored as important, Figure 12. Flexibility in supply comes next, never being regarded as unimportant. Then come 'tailored quality', working beyond contract and flexible packaging.

Question 11: Can you comment on why long term relations are so important?

Comments from Japan / Korea: *Customers like suppliers they can rely on and it is recognised that if suppliers can have confidence in their customers, trust will grow and each will work better together. This reduces the risk of various potential problems such as quality or delivery. This is a feature of Japanese culture.*

Comments from China and Indonesia: *Long term relations are a good way to help reduce prices and secure supply.*

vi). Environmental factors.

Results show that disposal of packaging is most important, Figure 13.

Question 12: Is there pressure to manage waste in the respective countries?

Comments from Japan: *As mentioned earlier, waste is not allowed. All materials must be recycled. The paper bag is normally recycled as fuel for electric power stations.*

Comments from Korea, China and Indonesia: *There is at present no pressure concerning waste disposal, but if packaging can be removed easily and cheaply then this is a process advantage that can save money.*

vii). Supplier image

Emphasis from the study is on ISO standards, followed by supplier's ethics and reputation. Supplier's health and safety is never deemed important, Figure 14

Question 13: Do the findings agree with what you'd expect?

Comments from all: *Yes exactly.*

Question 14: Do business ethics influence your trading decisions?

This question was accompanied by the definition:

'Business ethics is the study of standards which businesses should observe in their dealings over and above compliance with the law'.

There was much confusion surrounding what was understood by 'business ethics'. Overall the clearest message from each region was that 'trust'. Customers expect suppliers to be honest and truthful, particularly when problems occur.

Question 15: Does the supplier's health and safety record influence their selection?

Comments from Japan and Korea: *Only partly. We would expect suppliers to be responsible within their own countries for standards.*

Comments from China and Indonesia: *Western countries generally have high health and safety standards. These do not influence our decision concerning whom to buy from.*

viii). Supply

Figure 15 shows that overall country of origin was rated as most important.

Question 16: Why is the country of origin so important?

Comments from Japan and Korea: *Quality. Product from China or India may be regional, but quality is higher from the UK.*

Comments from China: *Quality. Highest quality comes from Western companies. However local Chinese producers are improving and can offer attractive costs in the future.*

Comments from Indonesia: *We buy product produced in Indonesia for use in Indonesia that has low transport cost and is good quality. We prefer not to buy from China, but India is improving.*

ix). Product Quality

This aspect was not included in the category scoring as it was expected that this would be taken as given. It was therefore analysed separately. Results for this show that local regulations and consistent quality were scored as important 100% of the time. Consistency in packaging quality was next, followed by highest possible product quality.

Question 17: Are the findings accurate?

Comments from all: Yes. It is most important that products consistently meet with local regulations, in particular Pharmacopoeia and Japanese or Korean FDA requirements. Regulatory rules dictate the ability to do business. Packaging should protect the product to ensure it is fit for use.

4.5 Summary

Chapter 4 presents analysis of participants' responses to the questionnaire. Analysis of the questionnaire categories to identify those most valued by the dental customers surveyed in Asia. Further analysis identifies those elements making up these categories that are perceived by the participant as having greatest value.

In Chapter 5 the outcomes from these analyses are summarised and explained in the context of each of the research objectives and the extant literature. Conclusions about the research question and implications for furthering understanding of the question are presented, based on the research findings. Limitations identified during execution of the research and their influence in the outcomes are also explored, as well as opportunities identified for further research.

Chapter 5

Conclusions and Implications

5.1 Introduction

Chapter 2 identified that in business to business relationships customer perceived value is the critical dimension in business marketing as opposed to customer satisfaction (Slywotzky, 1996; Reicheld et. al. 2000). Further, the earlier research concludes that value is more important than quality (Huang and Tai, 2003; Parasuraman (1997) and Woodruff (1997).

The extant literature shows some disagreement as to whether or not the perception of value is influenced by national culture (Hofstede, 1991; McSweeney, 2002; de Mooji, 2000). This has important implications concerning globalisation of businesses and marketing strategies. The present study aimed to explore if value measures in business to business relationships are influenced by national culture, with a focus on Asia.

This chapter examines the extent to which the research question has been answered by the study and how the findings add to the extant literature. Critical evaluation of the methodology employed is presented and ways in which this might be improved for future research are suggested.

Conclusions about the research objectives and the research question are made based on the research findings, and compared to earlier teaching. Limitations that became apparent during execution of the study and how these might have influenced the conclusions are explored.

Finally opportunities for further research to help advance understanding of the research question are suggested.

5.2 Critical Evaluation of Adopted Methodology

This research aimed to determine customers' views, value, attitudes and beliefs pertaining to value. The chosen methodology centres on a census survey of dental customers in Asia.

Accepting that focus is on a small, well defined, business group conclusions from the analysis of collected data are confined to the narrow business area.

One advantage of the relatively small business base was that it made it feasible to conduct telephone interviews through an interpreter. This helped test conclusions made of results from the self-administered questionnaire. However, as discussed in Chapter 1, section 1.2, the research only considered one stakeholder group: company buyers in Asia. Whilst a wider (or possibly a second) study might have been undertaken to consider the perspectives of other stakeholders, such as those in other regions or businesses these are outside the scope of the research. This wider study is due in part to time available for the study and in part due to resistance from the sales team in respect to including other customer groups. This latter stems from the belief that customer retention affords greater rewards than acquiring new customers. Benefits from the research therefore lie with understanding what it is that existing customers value.

The study adopted an interpretivist approach to the research as this offers a means to gain understanding of individual's perceptions of value in the natural business environment. It is inevitable that the investigator will influence the study (Saunders et. al, 2003). However, by recognising the lack of objectivity of the approach an attempt was made to overcome this by adopting a positivist quantitative approach to development of a questionnaire.

The choice of questionnaire as the key research instrument enabled the investigation to be quantified and allowed collection of data to be made from the 'real' environment over a large geographical area. The chosen instrument was time and cost efficient, and a well-recognised procedure that required little introduction.

It was also less intrusive than face-to-face interviews, but did not present opportunities for discussion, nor qualification of answers. However attempt was made to overcome this by follow-up telephone calls discussing results of the analysis.

Design of the questionnaire is thorough and explanation of the research purpose and relevance is made to respondents, along with guidance for completion. Pilot studies helped form the final survey, making it more effective as it served to highlight problems with the original instrument, such as ambiguity with questions. These issues were addressed prior to undertaking the survey proper. Nevertheless some weaknesses with the amended research instrument merit discussion.

The section of the research instrument examining product value includes some ambiguous elements (see Appendix 1, questions 1 and 2). The questions include elements concerning product recycling or disposal. The questions are not clear about how these might be accomplished. In the case of toothpaste, which is central to the study, practically these options can only be concerned with 'waste' material that is not for some reason suitable for use, otherwise used product is simply 'spat' into the sink following tooth cleaning.

The section of the questionnaire examining the supplier's characteristics, in particular that concerned with 'image' (see Appendix 1, question 7), is too vague in the area of ethical values and practices. The research instrument is not sufficiently clear about what is meant by these terms. Responses to this question had to be treated with caution.

The section of the research instrument concerned with supplier reliability (see Appendix 1, question 8) is too simplistic. The elements presented lend themselves too easily to a 'very important' response and so afford the study little learning.

Finally, the section of the questionnaire concerned with 'cultural factors' is brief and fails to probe any influence length of service might have on perceived value due to company culture.

The study approach was not longitudinal and so provided only a 'snapshot' of the environment at the time of the participants' involvement. Further weaknesses associated with the instrument include the researcher's own 'Weltanschauung' that will have influenced the questionnaire design, as well as the self-selection of participants due to limiting the study to INEOS Silicas' customers in the region. To try to reduce the researcher's bias in drawing up the questionnaire, a pilot was run that included sales personnel from a number of regions. This resulted in preparation of a number of drafts before the final questionnaire was designed.

An attempt to avoid self-selection of participants, through contacting industry members outside of INEOS Silicas' customer groups, was not implemented due to objections raised by the sales team.

Thus, although effort was made to minimise bias in the questionnaire, and to avoid limitations to identifying customer's values, the absence of face to face interviews prevented any opportunity for discussion on individual questions. Although the census was followed by telephone interviews with some of the participants, the influence of the questionnaire design cannot be ignored.

The study was a focused census in narrow business area. Conclusions beyond the findings can at best only be tentative. Discussion in the context of extant literature is therefore limited to the study findings.

The limited size of the survey prohibited rigorous statistical analysis of the data. Analysis was restricted to frequency testing and visual display using Trellis plots. These limitations constrain extrapolation of the findings to other regions or markets.

An additional influence on the study is that responses were obtained from particular individuals within the organisation. The census therefore fails to capture the views of other potential stakeholders within the respondents' organisations that could affect the conclusions.

There are other areas left unresolved by the study, such as the potential influence of INEOS Silicas' company culture on the researcher's perception of value. There could be a 'value gap' that remains unresolved by the study. These are shortcomings of this research that offer issues for future study and debate.

5.3 Conclusions About the Research Objectives

The essential difference between B2C and B2B marketing was identified as the forming of strong customer-supplier relationships in the latter. Within this context, the elements of trust as well perceived value are highly important. These formed the basis of the questionnaire.

Huang and Tai (2003) suggest that value is more important than quality, while Parasuraman (1997) and Woodruff (1997) show that customer value is an important source of competitive advantage. Thus, the initial aim of this study was to answer the question:

Q1. What are the essential components of value identified as most important by INEOS Silicas' Asian customers?

Figure 7, in section 4.3, from the study shows that cost is the element most valued by respondents to the census. Within this element, the specific parameter of 'application cost', that includes packaging waste disposal, was identified as most important, Figure 8.

The outcome agrees with the extant literature that a value-based / value-focused strategy is a key element in increasing the likelihood of success (Slywotzky, 1996; Porter, 1996; Higgins, 1998; and Huber *et.al.*, 2001).

Examination of factors that constitute value, sections 4.3.2 and 4.3.3, revealed that technical service and supplier reliability are highly important elements of value delivery. This supports the view of Maklan and Knox (1997) that 'brand value', the traditional concept of value, is not sufficient. Customers are less interested in

supplier image than in supplier support and delivery. Processes outside of traditional marketing therefore generate value in this context.

Further analysis in section 4.3.4 found product innovation and long term relationships are important. However, there was no desire for joint development activities. These highlight that in business to business markets economic rather than emotional reasons dictate purchasing decisions (Gross, 1997).

Considering the benefit-sacrifice model (Patterson and Spreng, 1997, p.421) the census finds that for these respondents, valued 'cost in use', supplier reliability and service offset the cost sacrifice. If innovation serves to help the parties enter new markets, either through new product development (Japan and Korea) or through provision of equivalent products (China and Indonesia) that can drive down price, this too is a valued benefit.

Thus in respect to the first objective of this study, the findings show that the essential components of value as perceived by the respondents (Woodruff and Gardial, 1996; Anderson and Narus, 1998) lie with cost in use, supported by reliable delivery and technical service.

However, as stated earlier, an inherent difficulty in defining value lies with it being an evolving concept over time (Naumann, 1995). The findings are therefore a 'snapshot' of respondents' desires.

In terms of the conceptual model, Figure 6, the results relate to the element defined by Knox and Maklan (1998) and made up of Kano's and Khalifa's models. Thus 'cost in use' and benefits from reliability and service mediate price.

The second aim of this study was to answer the question:

Q2. Does national culture influence the perception of the essential components of value explored in the study?

This question forms the element labelled ‘national culture’ in the conceptual model, Figure 6.

The basis for the question can be traced to Hofstede’s (1991) assertion that cultures can be characterised on a regional basis, and De Mooji’s (2000) report that there are large differences in the value systems of peoples in Europe.

The study found, based on the assumption that quality is assured that cost is highly important to all of the respondents whatever their nationality, (Figure 17). This finding was confirmed by answers to questions formed around the census conclusions.

At this level the findings disagree with Hofstede (1991) and de Mooji (2000), but agree with those of You *et.al.* (2000); Takada and Jain (1991), Li and Calatone (1998) and Steenkamp *et.al* (1999).

However, differences were found in emphasis placed on the elements forming the value components.

Considering the whole cost element: packaging disposal, while not forming a significant cost, has great emphasis in Japan due to pressure surrounding zero waste, Figure 8. A benefit for trading in Japan could lie therefore with using packaging that is easy to recycle. In marketing terms this element represents an external environment factor that cannot be controlled (Steenkamp *et. al.*, 1999; Clark, 1990) (*viz.* legislative pressure within a country), but can be managed with an appropriate strategy.

Considering quality, emphasis was placed on consistently meeting local regulatory requirements, Figure 16. This then could be an example of differences between cultures, but is in reality an legislative element rather than a cultural influence. It would be expected that similar restrictions play a role in other global regions. It is therefore a country-based difference that can be managed. Of greater importance were respondents’ responses to the question of product supply, Section 4.3.5.

There was a strong perception that Western producers place more emphasis on quality than local suppliers do, but there were warnings that this is changing.

Considering innovation (Figure 20), whilst valued by all respondents, greatest emphasis is placed by Japan and Korea on new (improved) products whereas in China and Indonesia products that are equivalent to competitor offerings are more readily acceptable. With this finding it can be argued that agreement is found with Hofstede (1991) and de Mooji (2000) in that cultural factors influence value. The likely driver for Japan and Korea is new market development. For China and Indonesia it is cost.

Differences in the perceived value of technical service were also found between pairs of countries, Figure 20. Korea and China placed this higher than Japan and Indonesia. Further, in terms of non-technical support Japan values long term relations more highly than any of the other countries. The Japanese respondents seek to build working relationships and understanding, whilst the other countries' respondents place greater emphasis on potential cost savings benefits. The finding provides learning that fits with Takada and Jain's (1991) suggestion that country based differences, once recognised, can be used to formulate strategy to fit with cultural values.

The findings related to "question 2" thus support the conceptual model that national culture affects the emphasis placed on elements of perceived value.

5.4 Conclusions About the Research Question

The 100% response rate achieved was very good, although the number included in the census was small. The small number did however afford an opportunity to follow up the questionnaire with discussion about the findings. This served to test the conclusions drawn by the researcher and enabled further information to be obtained about the responses. Combining the two approaches strengthened the research conclusions.

As already mentioned the study represents a 'snapshot' of perceived values expressed by a particular group of individuals within their respective organisations. Conclusions therefore are limited by this restriction. The researcher did undertake telephone interviews with respondents to test conclusions made from data analysis.

The researcher might have extended the study to include other world regions, however the restrictions described earlier made this impractical.

Considering the respondents' personal characteristics, the proportion of nationalities represented is well balanced, although Indonesia had only one representative. The researcher believes that the breadth of cultures is of value in contributing to the research aims. Ironically, this breadth is one of the factors that exclude the use of Hofstede's (1994) value survey module as a research instrument.

The respondents' lengths of service are sufficient to show that these are experienced individuals. It is also probably sufficient to suggest there might be some influence of company culture on their view of value. As mentioned earlier, this influence is not considered in the study, for reasons given, and is one shortcoming of the research.

An additional factor neglected by the survey is the possible influence of the respondents' ages on value perception. This factor has been reported as important in other areas (e.g. Page, 1999).

The research question that the study aimed to answer was:

- Is customer perceived value influenced by national culture in business-to-business marketing?

The questionnaire responses and subsequent interviews conclude that at the headline level the answer is 'no'. All of the respondents value low cost in use that is effectively supported by supplier reliability and technical service. This conclusion

concur with Maklan and Knox (1997) that business processes traditionally outside the concept of 'brand value' are increasingly generating value.

Beyond this headline the study found that national culture does have an influence on the emphasis placed on defined elements forming the value components. Thus, for example, Japan and Korea value new product innovation, while China and Indonesia express a willingness to accept equivalent products to those already supplied, as a means to drive down cost. This apparent contradiction is not entirely surprising as local pressures will have a mitigating role in value perceptions. These behaviours fit with de Mooij's European study (2000) in that differences in value systems exist between countries within a region. They don't however fit well with Hofstede's (1991) general model, which tends to group behaviours of large geographical regions that include a number of nationalities and cultures.

As reported before, the limited size of the census prohibits rigorous statistical analysis of the data. However, the frequency analysis that has been used lends itself to identification of patterns in the responses.

Analysis finds that the respondents' perception of value lies with cost, service and reliability and thus agrees with the extant literature that value-based strategies are key in aiding success (Huber *et.al.*, 2001; Porter, 1996; Higgins, 1996; Patterson and Spreng, 1997; Knox and Maklan, 1998).

Further, innovation and long term relations are highly valued and influence the benefit-sacrifice model of Patterson and Spreng (1997).

The data finds that national culture influences the emphasis placed on these value elements, such as the emphasis on waste disposal in Japan where there is a greater culture of 'zero waste' than any of the other countries.

Additionally, attitudes to long term relationships and benefits from these differ between the countries forming the census. Japanese culture seeks long term

relationships that benefit both the customer and supplier. The other countries see such a relationship as a specific means to lower costs.

With respect to the conceptual model the area labelled 'national culture' is a valid addition to the models from the extant literature. The desire for suppliers to support their company's competitive position is enunciated by factors identified by the respondents as 'important to value'. Further research is required to ascertain if these findings translate to other regions, and to determine their relative strength in influencing value perceptions. The finding that the influence of culture on perceived benefits is an important factor to be accounted for in the formulation of marketing strategy, and this agrees with Steenkamp et. al. (1999) that culture is an environmental factor in marketing that cannot be controlled but which can be managed with an appropriate strategy. The information from *this* research could form a valuable aid in identifying means to influence uncontrollable exogenous factors to aid marketing in different countries.

5.5 Limitations

The research study was limited to 9 producers of toothpaste located in four countries in the Asian region. This narrow confine was designed to enable a census to be made of key players in the region in sufficient depth to answer the research question. Physical limitations on travel prevented face-to-face interviews, but conducting discussions following analysis of the questionnaire data served to temper this shortcoming.

The sharp focus of the research did limit the breadth of applicability of the findings. Thus the information collected was that of individuals holding particular positions within their organisations. These individuals were all nationals of their respective countries so in regard to the research question, which focused on cultural influences, this factor is highly relevant.

The research instrument employed has in itself inherent disadvantages as discussed in section 3.4.2. The design of the questionnaire was thorough and the use of a pilot study certainly helped make the final census more successful, as it highlighted problems with the original research instrument such as ambiguous questions. Nevertheless, the amended research instrument was still only available in English. This weakness was partially overcome through the aid of interpreters for each country, but there was no opportunity to have a written document in native language for scrutiny and pilot testing.

The section of the research instrument dealing with environmental aspects is ambiguous with respect to product disposal as the product forms part of the final toothpaste formulation. Disposal is therefore outside the hands of the toothpaste producer.

The section concerning the elements of supplier reliability was found to be irrelevant in that all elements are desirable so that there was no opportunity for learning customer emphasis. Better might have been to use a 'ranking' scale for these elements rather than the Likert scale.

The concept of business ethics was one that caused confusion, despite a definition being suggested. Findings for this element are therefore inconclusive.

Because the census was small, data analysis was limited. Frequency of analysis and Trellis plots served to provide patterns of response. These, however, were not of sufficient quantity to use in rigorous statistical models. The conclusions therefore are qualitative.

5.6 Opportunities for Further Research

Huang and Tai (2003) report that business should know the value needs of its customers ahead of any other factor. Slywotzky (1996), Porter (1996) and Huber et. al (2001) assert that value based strategies are the key to increasing the likelihood of success. Steenkamp et. al (1999), Clark (1990), Takada and Jain

(1991) found that national culture is an uncontrollable exogenous factor that impacts on business activities across countries.

Hofstede (1991) reports that cultures can be characterised on a regional basis, while in contrast de Mooji (2000) suggests large differences exist between the value systems of peoples in the region of Europe. Cutting across all of these arguments, Gross (1997) argues that in business markets purchasing manager's decisions are guided mainly by cognitive factors and not affective ones.

The present study found that there are indeed differences between cultures in respect to the emphasis placed on elements forming a value offering. Additionally, the respondents to the survey are relatively experienced, arguably making it reasonable to assume their perceived values are important influences of business to business relationships. A further study should examine if this experience, based on cultural values, is tainted by company values particularly if multi-national companies are included. Given the study was limited to a small number of customers in a few countries in a defined region, the findings are limited. Complimentary studies of similar customers in other regions of the world would be a great benefit in providing opportunity to gauge views from different cultures.

It is the researcher's view that conducting a similar study across a number of countries in another region of the world would serve not only to provide information between countries in that region, but would also enable comparison to be made between regions.

Extending the survey and combining data with that from other regions could also provide a critical mass of information that enables statistical analysis to be applied to test findings more robustly.

These further studies could be undertaken using the same research instrument as used in this research, with some slight modifications as highlighted in Chapter 5. These studies could include other markets. Findings could be compared to this

study to determine how a global, value-based, strategy might be formulated to gain competitive advantage across a number of regions.

Chapter 6

Recommendations

The conclusions discussed in Chapter 5 identify three significant factors affected by cultural influences: cost, service and reliability. Findings for these lead directly to the following recommendations for INEOS Silicas to implement.

This chapter begins by revisiting the elements comprising these factors and follows this with a number of recommendations aimed at satisfying the respondents' perception of value.

6.1 The cost component

Product 'cost in use' was identified as having greatest value. Means to drive down cost, or increase value, were linked to innovation. For Japan and Korea innovation was identified as a means to add value through development of improved toothpaste formulations having higher value. For China and Indonesia innovation was viewed as a means to provide equivalent products to those currently in use, but at lower cost.

Innovation could also include supply chain management, so following the view of Maklan and Knox (1997) that business processes can provide a key source of competitive advantage.

Packaging disposal costs were also identified as influencing value, particularly in Japan where a policy of zero emissions and compliance to ISO 14001 is highly important.

6.2 Service

Local support that is capable of actively solving problems was identified as having high value. Provision and funding of a local technical service laboratory managed

by personnel skilled in oral care application would meet this need. Local sales teams speaking the same language as the respondents could support the approach.

INEOS Silicas' Indonesian facility provides an opportunity for investment in this service. Consideration should also be given to funding of local laboratory services in China.

6.3 Reliability

Key here is OTIF delivery to fit with 'Just In Time' manufacture. This helps customers drive down cost by avoiding stock management. Cost estimates could also be made of local warehousing to support a number of customers in a region. This would increase confidence in provision of a reliable supply chain.

6.4 Innovation and support

New product development was identified as high value in Japan and Korea. In China and Indonesia innovation includes provision of equivalent products, at lower cost, to those currently supplied.

INEOS Silicas should maintain an innovation programme based on regular communication with respondents to ensure provision of product meeting their needs. Forming strong links based on long-term relationships would provide a foundation on which to build the programme.

6.5 Environment and image

INEOS Silicas must ensure all manufacturing sites worldwide gain ISO 14001 accreditation. In addition packaging materials that are easily recycled should be identified to support customers' to reach their goal of zero emissions and ISO 14001 accreditation.

6.6 Global supply and quality

Value of supply was less about global manufacturing capability and more about quality. The respondents' perception is that quality from Western producers is higher than that from the low cost producers in China or India.

INEOS Silicas should identify quality standards that raise barriers to prevent entry by competitors from these low cost locations. These standards can be used to improve image and to maintain long term relationships.

6.7 Implementation

To deliver the recommendations an implementation plan has been formulated to deliver the following:

- Local technical support
- New innovations
- Packaging solutions

Each of these is considered below.

6.7.1 Local technical support

During the period of this MBA study, INEOS Silicas implemented this recommendation. Basis for the investment was provided by customer survey. Located at INEOS' Indonesian facility a laboratory has been equipped and staffed to provide technical support to customers in the Asian region. The investment was in the order of £100K.

6.7.2 Innovation

An innovation programme to deliver the following products is proposed:

- A toothpaste abrasive silica equivalent to that already supplied by competitors into China and Korea.
- A new high cleaning silica abrasive initially aimed at Japan and Indonesia. This product could also be suited to other world markets.

Details of resource requirements and timing are given below.

6.7.2.1 Equivalent toothpaste abrasive

Low abrasive dental silicas provided by INEOS Silicas' competitors are in the order of 60,000 mt/yr. This has an estimated NSV of Euro 46.1m (internal analysis).

The technical proposal encompasses production capability to supply the product from the UK, Indonesia and Brazil to service the local regions.

Expected growth of business is shown, for Asia alone, in Table 5.

Resource estimates are shown in Table 6.

Table 5. Expected growth of equivalent silica in Asia

	2007	2008	2009
Metric tonnes	1100	2250	2500
NSV(000's Euro)	730	1500	1700
GM (000's Euro)	345	714	825

Table 6. Resource estimates for development of equivalent abrasive silica

Person weeks	2007	2008	2009
Project manager	4	7	3
Technician	7	4	0
Process engineer	1	5	2
Technical applications	2	6	4
Marketing	2	4	2
Sales	2	4	2

As an indication of required capital, investment in plant in the order of \$1-2m to increase capacity may be required. Consideration will also need to be given to the impact on operations concerning the existing product mix, at all production facilities.

6.7.2.2 New high cleaning silica

It is estimated that in Asia there could be demand for about 1300 mt/y for a new high cleaning silica. This could deliver an NSV of about \$1.2m. Globally the potential is estimated to be \$7.1m.

A technical programme would be designed to have the capability to produce the product in the UK, Indonesia and Brazil.

Table 7 provides a summary of growth opportunities expected for Asia. Table 8 records expected the resource required.

The capital estimate identified above for the equivalent silica abrasive product would also enable production of this product.

Table 7. Estimated growth for high cleaning silica in Asia

	2007	2008	2009
Metric tonnes	300	500	500
NSV (000's Euro)	265	440	440
GM (000' Euro)	140	240	240

Table 8. Resource estimates to deliver high cleaning silica

Person weeks	2007	2008	2009
Project manager	4	7	3
Technician	7	4	0
Process engineer	1	5	2
Technical applications	2	6	4
Marketing	2	4	2
Sales	2	4	2

6.7.2.3 Packaging solutions

This is a longer term, and much larger challenge than any of the other recommendations. This is because in order to minimise cost, it is desirable to employ, as far as is practicable, the same packaging across all regions. Packaging must protect the product from ingress / egress of moisture and from ingress of odours. This protection must last for upto 12 months in all conditions of humidity and over a range of temperatures.

Whilst paper would be an ideal material with respect to recycling, it is not generally effective in protecting against odour although it can be formed to protect against moisture movements.

Project justification would need to be on a global basis. To support this, the recommendation to conduct a similar study to the present one would, if implemented, serve to gauge how important packaging solutions might be in other regions.

6.8 Conclusions

This census study has, through the use of a questionnaire, identified a number of commonly held values held by buyers in the Asian region. Additionally a number of differences were found to exist between respondents from the different countries covered by the census. The findings served to highlight an important parameter, that of national culture, to be taken into account when formulating markets strategy on a global basis. Local values should be identified and, to gain a competitive edge means to deliver against these values should be sought.

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Appendix A1.

Questionnaire

Guidance Notes to Complete the Questionnaire

For the questions please check the number that applies, *1=Very Important; 2=Important; 3=Neutral; 4=Unimportant; 5=Very Unimportant.*

For example, if a feature is important to you, *check the number '2'. If it is very unimportant, check the number '5'.*

1	2	3	4	5
Very important	Important	Neutral	Unimportant	Very unimportant

	1	2	3	4	5
Feature 1: Important	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feature 2: Very unimportant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Questions on Product Features

1. Environmental aspects

*Indicate your view of the following features of a silica product in your application.
Features can include this that do not currently exist, but could do so in the future.*

1	2	3	4	5
Very important	Important	Neutral	Unimportant	Very unimportant

	1	2	3	4	5
Product can be recycled*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product is easily disposed of when used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product can be re-used in the application**	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packaging can be recycled*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packaging is easily disposed of when used**	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packaging can be returned for re-use**	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of product disposal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of packaging disposal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Recycled: Used product / packaging can be recycled in an environmentally friendly manner.

**Re-used: Product / packaging can be regenerated for use again in the application.

2. Cost aspects

Indicate your view of the following cost aspects of a silica product in your application.

1	2	3	4	5
Very important	Important	Neutral	Unimportant	Very unimportant

	1	2	3	4	5
Low cost in application	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low product disposal costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low packaging disposal costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low energy costs in use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Quality aspects

Indicate your view of the following quality aspects of a silica product in your application.

1	2	3	4	5
Very important	Important	Neutral	Unimportant	Very unimportant

	1	2	3	4	5
Product meets local regulatory standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Highest possible product quality, exceeding requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consistent product quality, meeting requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Highest possible packaging quality, exceeding requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consistent packaging quality, meeting requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Questions about Suppliers

4. Innovation

Indicate your view of the following quality aspects of a supplier.

1	2	3	4	5
Very important	Important	Neutral	Unimportant	Very unimportant

	1	2	3	4	5
Demonstrates continual new product development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tailors products to your needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can supply products that are equivalent to competitors'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier is willing to work on joint product developments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier will work supply chain to meet your needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier will work with other suppliers to meet your needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Technical service

Indicate your view of the following technical service aspects of a supplier.

1	2	3	4	5
Very important	Important	Neutral	Unimportant	Very unimportant

	1	2	3	4	5
Supplier provides local technical support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier is pro-active in providing solutions to problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier promotes continuous improvement in your product	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier promotes continuous improvement in your process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Supplier support

Indicate your view of the following aspects of a supplier.

1	2	3	4	5
Very important	Important	Neutral	Unimportant	Very unimportant

	1	2	3	4	5
Supplier willing to work beyond the contract terms*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier promotes long term relationship with you	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier willing to meet your needs on packaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier willing to meet your supply chain needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier willing to meet your unique requests on quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*For example providing support in problem solving

7. Image

Indicate your view of the following aspects of a supplier.

1	2	3	4	5
Very important	Important	Neutral	Unimportant	Very unimportant

	1	2	3	4	5
Importance of supplier’s reputation in your industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other customer’s endorsements of supplier’s products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The supplier’s ethical values and practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The supplier’s health and safety standards / record	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The supplier’s environmental standards / record	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The supplier having ISO 9002 accreditation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The supplier having ISO 14000 accreditation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Reliability

Indicate your view of the following aspects of a supplier.

1	2	3	4	5
Very important	Important	Neutral	Unimportant	Very unimportant

	1	2	3	4	5
Supplier providing delivery on time in full	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier providing clear and accurate transactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier’s flexibility in meeting your delivery needs (including emergency supply)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Global supply

Indicate your view of the following aspects of a supplier.

1	2	3	4	5
Very important	Important	Neutral	Unimportant	Very unimportant

	1	2	3	4	5
Supplier having regional production that meets your needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is dual source capability from each supplier important?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Importance of country of origin of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relative Importance of Categories Explored

For the following questions please indicate, in the rating column, the relative order of importance of each of the categories identified.

Please score according to the scale: Most Important=1. Least Important=8.

	Rating
Environmental factors	<input type="checkbox"/>
Cost factors	<input type="checkbox"/>
Supplier Innovation	<input type="checkbox"/>
Supplier Technical Service	<input type="checkbox"/>
Solidarity	<input type="checkbox"/>
Supplier's image	<input type="checkbox"/>
Supplier's Reliability	<input type="checkbox"/>
Supplier's ability to supply product globally	<input type="checkbox"/>

Cultural Factors

Please provide information on the following:

Your nationality	
Your country of work	
Your length of service with your company	
Your company's nationality	

Comments

If you have any comments on any of the areas covered, please insert them here.

Appendix A2.

Raw Data for Figures

Raw data for analysis and to prepare Trellis plots, Figures 17 to 22.

	China		Indonesia	Japan			Korea		
	A	B	C	D	E	F	G	H	I
Environmental aspects									
Environmentally recycle product	3	2	1	5	4	1	3	5	5
Product disposal ease	2	1	1	4	4	1	3	5	5
Product re-use	4	3	2	3	5	5	4	5	5
Environmentally recycle packaging	2	3	2	1	1	1	4	2	2
Package disposal ease	3	2	1	1	2	4	3	1	2
Packaging re-use	4	3	1	2	2	1	5	2	4
Cost of product disposal	2	1	1	5	5	2	4	4	5
Cost of packaging disposal	2	1	1	1	1	2	4	1	3
Cost aspects									
Low cost in application	1	1	1	1	1	2	1	1	1
Low product disposal costs	2	1	2	5	4	3	4	5	4
Low packaging disposal costs	2	1	2	2	2	1	4	2	3
Low energy costs in use	3	1	2	2	4	4	3	4	3
Quality aspects									
Product meets local regulations	1	1	1	1	1	1	2	1	1
Highest possible quality	3	2	2	3	2	2	2	3	2
Consistent product quality	1	1	1	1	1	1	2	1	1
Highest possible packaging quality	3	2	3	4	4	3	3	3	3
Consistent packaging quality	1	1	1	2	2	1	3	2	3
Innovation									
Continued NPD	2	2	1	1	1	1	1	2	2
Tailored products	2	2	1	3	3	2	1	2	3
Equivalent products	1	1	1	5	2	3	2	4	3
Joint development	2	3	1	5	4	2	1	5	3
Supply chain improvements	1	3	1	3	4	2	2	3	2
Cooperation with competitors	2	3	1	5	5	5	2	5	2
Technical service									
Local support	2	2	1	1	1	1	1	1	2
Pro-active problem solving	1	1	1	1	2	1	1	2	2
Improves YOUR product	1	1	1	1	2	1	2	2	3
Improves YOUR process	2	2	1	4	5	3	2	5	3
Solidarity									
Work beyond contract	2	1	1	1	3	1	3	4	4
Long term relations	2	1	2	1	1	1	2	2	2
Flexible packaging	2	1	2	5	4	2	4	3	2
Flexible supply chain	1	2	1	3	2	3	3	2	2
Tailored quality	2	1	1	3	5	2	3	5	2
Image									
Supplier reputation	2	1	2	3	5	2	2	5	2
Endorsements	4	2	3	5	5	2	2	4	2
Ethics	1	1	1	1	2	2	1	3	3
Health and Safety	1	1	1	3	3	2	3	2	3
Environmental standards	1	2	1	5	4	1	3	4	3
ISO 9002	2	2	1	2	1	1	4	1	2
ISO 14000	2	2	1	1	2	1	4	2	2
Reliability									
OTIF	1	1	1	1	1	2	2	1	1
Easy transactions	2	1	1	1	2	2	2	2	2
Flexible delivery	1	1	1	2	1	1	2	3	2
Global supply									
Regional supply	1	4	1	4	2	3	3	5	2
Dual source capability	1	4	2	3	3	2	3	3	2
Country of origin	2	3	2	2	2	2	4	4	1
Relative importance									
	A	B	C	A	B	C	A	B	C
	China		Indonesia		Japan		Korea		
Environment	5	7	2	2	6	3	8	5	7
Cost	2	1	1	1	1	2	6	1	1
Innovation	3	6	6	3	3	4	2	2	3
Technical service	4	3	5	5	4	1	1	4	2
Solidarity	8	5	8	6	6	7	5	6	8
Image	6	4	7	8	8	6	4	8	6
Reliability	1	2	4	4	2	5	3	3	4
Global supply	7	8	3	7	7	8	7	7	5

Data for Figure 7. Relative importance of value categories

Relative importance								
Respondent	Environment	Cost	Innovation	Technical service	Solidarity	Image	Reliability	Global supply
A	5	2	3	4	8	6	1	7
B	7	6	5	3	2	4	1	8
C	7	8	3	6	1	2	5	4
D	2	1	3	5	6	8	4	7
E	6	1	3	4	5	8	2	7
F	3	2	4	1	7	6	5	8
G	8	6	2	1	5	4	3	7
H	5	1	2	4	6	8	3	7
I	7	1	3	2	8	6	4	5
Answer								
1	0	4	0	2	1	0	2	0
2	1	2	2	1	1	1	1	0
3	1	0	5	1	0	0	2	0
4	0	0	1	3	0	2	2	1
5	2	0	1	1	2	0	2	1
6	1	2	0	1	2	3	0	0
7	3	0	0	0	1	0	0	5
8	1	1	0	0	2	3	0	2
	0	0	0	0	0	0	0	0
25th Percentile	2.75	1	6	2	3	2	1	3
75th Percentile	6.25	4	2	7	6	4	5	6
	4	1	0	0	3	3	0	7
	Environment	Cost	Innovation	Technical service	Solidarity	Image	Reliability	Global supply
% Freq. in top Quartile	11	67	22	33	22	11	33	0
% Freq. in bottom Quartile	89	33	78	67	78	89	67	100
Total	100	100	100	100	100	100	100	100
		25th Quartile	75th Quartile					
Cost		67	33					
Technical service		33	67					
Reliability		33	67					
Innovation		22	78					
Solidarity		22	78					
Environment		11	89					
Image		11	89					
Global supply		0	100					

Data for Figure 8. Importance of elements forming cost

	Low cost in application	Low packaging disposal costs	Low product disposal costs	Low energy costs in use
% Important	100	78	33	33
% Neutral	0	11	11	33
% Not important	0	11	56	33

Data for Figure 9. Importance of elements forming technical service

Local support	Pro-active problem solving	Improves YOUR product	Improves YOUR process
100	100	89	44
0	0	11	22
0	0	0	33

Data for Figure 10. Importance of elements forming supplier reliability

OTIF	Easy transactions	Flexible delivery
100	100	89
0	0	11
0	0	0

Data for Figure 11. Importance of elements forming innovation

Continued NPD	Tailored products	Equivalent products	Joint development	Supply chain improvements	Cooperation with competitors
100	67	56	44	56	44
0	33	22	22	33	11
0	0	22	33	11	44

Data for Figure 12. Importance of elements forming supplier support

Work beyond contract	Long term relations	Flexible packaging	Flexible supply chain	Tailored quality
56	100	56	67	56
22	0	11	33	22
22	0	33	0	22

Data for Figure 13. Importance of elements forming the environmental factor

	Environmentally recycle product	Product disposal ease	Product re-use	Environmentally recycle packaging	Package disposal ease	Packaging re-use	Cost of product disposal	Cost of packaging disposal
% Important	33	44	11	78	67	56	44	78
% Neutral	22	11	22	11	22	11	0	11
% Not important	44	44	67	11	11	33	56	11

Data for Figure 14. Importance of elements forming supplier image

Supplier reputation	Endorsements	Ethics	Health and Safety	Environmental standards	ISO 9002	ISO 14000
67	44	78	56	44	89	89
11	11	22	44	22	0	0
22	44	0	0	33	11	11

Data for Figure 15. Importance of elements forming supply capability

Regional supply	Dual source capability	Country of origin
44	44	67
22	44	11
33	11	22

Data for Figure 16. Importance of elements forming quality

Product meets local regulations	Highest possible quality	Consistent product quality	Highest possible packaging quality	Consistent packaging quality
100	67	100	11	78
0	33	0	67	22
0	0	0	22	0